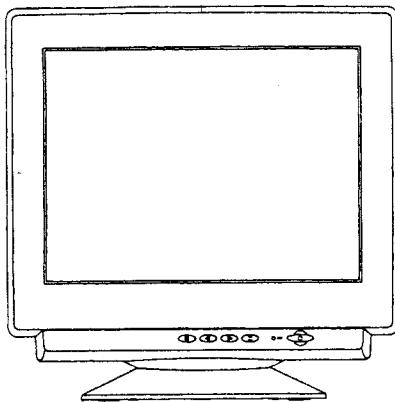


# Service Manual

## VIEWSONIC G810

**Chassis No. HV8SA**  
**Chassis Family No.21HV8SA**



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# **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public.

It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians.

Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# SAFETY PRECAUTIONS

## 1 CAUTION:

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guide lines.

## 2 SAFETY CHECK

Care should be taken while servicing this CRT display because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

## 3 FIRE & SHOCK HAZARD

- 3-1 Insert an isolation transformer between the CRT display and AC power line before servicing the chassis.
- 3-2 In servicing pay attention to original lead dress especially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.
- 3-3 All the protective devices must be reinstalled per original design.
- 3-4 Soldering must be inspected for possible cold solder joints, frayed leads, damaged insulation, solder splashes or sharp solder points. Be certain to remove all foreign material.

## 4 LEAKAGE CURRENT COLD CHECK

- 4-1 Unplug the AC cord and connect a jumper between the two prongs on the plug.
- 4-2 Turn the CRT display power switch "on".
- 4-3 Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metallic part on the CRT display such as the metal frame, screwheads, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be 1.8 megohm minimum.

## 5 LEAKAGE CURRENT HOT CHECK

- 5-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.
- 5-2 Connect a 1500 ohm, 10 watt resistor, paralleled by a 0.15 $\mu$ F capacitor between each exposed metallic part and a good earth ground (as shown in Fig.1).
- 5-3 Use an AC voltmeter with 1000 ohm/volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and 0.15 $\mu$ F capacitor.
- 5-4 Move the resistor connection to each exposed metallic part and measure the voltage.
- 5-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.
- 5-6 Voltage measured must not exceed 7.5 volt RMS, from any exposed metallic part to ground. A leakage current tester may be used in the above hot check, in which case any current measured must not exceed 5.0 milliamp. In the case of a measurement exceeding the 5.0 milliamp value, a rework is required to eliminate the chance of a shock hazard.

*Note: High voltage is present when this CRT display is operating. Always discharge the anode of the picture tube to the display chassis to prevent shock hazard.*

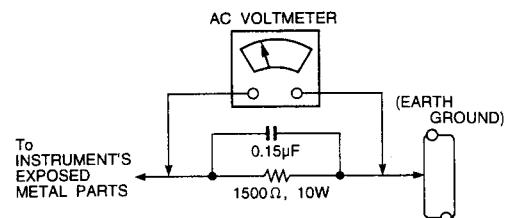


Fig.1

## 6 IMPLOSION PROTECTION

Picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only Panasonic replacement picture tubes.

## 7 X-RADIATION

**WARNING :** The only potential source of X-Radiation is the picture tube. However when the high voltage circuitry is operating properly there is no possibility of X-Radiation problem. The basic precaution which must be exercised is to keep the high voltage at the following factory-recommended level.

*Note: It is important to use an accurate periodically calibrated high voltage meter.*

- 7-1 The procedure for adjustment high voltage is as shown on page 27.
- 7-2 If can not be adjust 27.0 kV at immediate service is required to prevent the possibility of premature component failure.
- 7-3 To prevent X-Radiation possibility it is essential to use the specified picture tube.

## IMPORTANT SAFETY NOTICE

There are special components used in this CRT displays which are important for safety. These parts are identified by the international symbol on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire or other hazards. Do not modify the original design or this will void the original parts and labor guarantee.

# GENERAL INFORMATION

## 1. OUTLINE

This monitor is 21 inch (20.0" viewable) multi-scan color CRT display with the following features.

OSD (on screen display) control is newly introduced , which allows easy user adjustment.

Power saving function, which helps saving energy, is also one of the highlights of this model.

## 2. FEATURES

### 2-1 Power Saving

- Built in Power Saving function based on VESA-DPMS standard. Power energy shall be saved by controlling the circuit in accordance with power save signal from computer.

### 2-2 OSD (on screen display) function

- OSD (5 languages) function is new and excellent man-machine interface.

Anyone is able to set up the picture as he like through OSD menu.

### 2-3 Self Test function

- Self Testing picture comes out by pushing any key in the case of no-connection with computer or power saving operation.

This function shows if monitor is alive or not and can be used for self aging test.

### 2-4 Ergonomic design

- Low emission design to meet MPR II and TCO'92
- ESF (Electro static field) free coating on CRT

### 2-5 Multi scan with digital technology

- 8 bit micro computer controls the circuit operation

to meet with wide range signal of  $f_H=30\sim95\text{kHz}$  and  $f_V=50\sim160\text{ Hz}$ . So VGA640x350, VGA640x400, VGA640x480, SVGA800x600, 1024x768, 1152x870, 1280x1024 and 1600x1200 mode are applicable.

### 2-6 1 Factory preset (+7 Reservation), 13 user memories.

- 1 standard mode is preset at the factory.
- 7 modes are reserved at the factory.
- 13 user memories are available to set the users own timing and display information.

### 2-7 Flat Face and fine dot pitch

- Flat face CRT with a fine dot pitch (Horizontal : 0.218mm / Vertical : 0.130mm) gives a comfortable sight of the screen.

### 2-8 Superior display performance

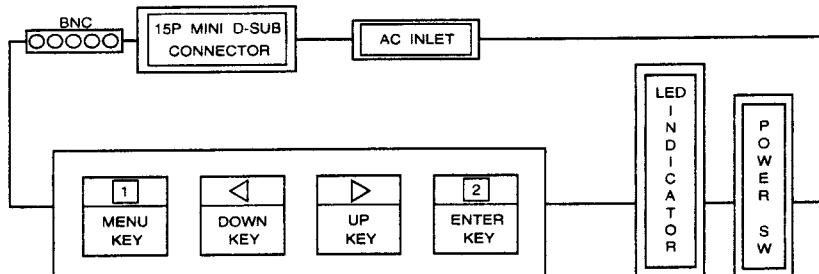
- Good focus by sophisticated gun and dynamic focus circuit
- High contrast
- Minimized distortion by correction circuit
- Good convergence
- Users enjoy full scan image for graphics

### 2-9 Special function

- Moire reduction circuit
- Rotation control circuit
- VESA/DDC1 & DDC2B (Display Data Channel) Compatible

# SPECIFICATION

## 1. DIAGRAM



1.1 POWER SW, LED, [1]-key (MENU),  $\triangleleft$ -key (DOWN),  $\triangleright$ -key (UP), and [2]-key (ENTER) are located on the front panel.

1.2 Signal connectors and AC inlet are located on the back side of the cabinet.

1.3 OSD menu includes the following function.

CONTRAST	BRIGHTNESS	DEGAUSS
RECALL	H. POSITION	H. SIZE
V. POSITION	V. SIZE	V. PINCUSHION
TRAPEZOID	PARALLELOGRAM	ROTATION
COLOR TEMPERATURE	DISPLAY FREQUENCY	

VIDEO INPUT LEVEL      VIDEO INPUT SELECT  
H. MOIRE            V. MOIRE            LANGUAGES

- ※) CONTRAST can be directly controlled with  $\triangleleft/\triangleright$ -key.
- ※) With sync signal, OSD menu appears by pushing [1]-key and [2]-key.  
Without sync signal, self test menu appears by pushing any key.

## 2. MECHANICAL SPECIFICATIONS

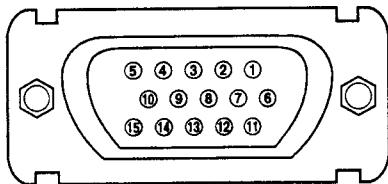
.... refer to the attached drawing

2.1 Dimension	Height : 487 mm (19.2") (typ.)
	Width : 505 mm (19.9") (typ.)
	Depth : 519 mm (20.4") (typ.)
2.2 Net Weight	: 27.5 kg (60.5 lbs) (typ.)
2.3 Maximum Viewable Phosphor Display Area	: 508 mm (20.0") (typ.)

## 3. CONNECTORS

3.1 Signal connector	: 15P Mini D-Sub connector x1
	: BNC CONNECTOR x5
3.2 AC inlet	: CEE 22 typed connector

<15P Mini D-Sub Pin assignment>



1 ... RED	6 ... GROUND	11 ... GROUND
2 ... GREEN	7 ... GROUND	12 ... SDA (DDC)
3 ... BLUE	8 ... GROUND	13 ... H. SYNC.
4 ... GROUND	9 ... - (OPEN)	14 ... V. SYNC.
5 ... GROUND (DDC)	10 ... GROUND	15 ... SCL (DDC)

## 4. CRT SPECIFICATIONS

Part No.	M51KYY540X
Type	21", 90°, 29Ø, in-line gun (Viewable:20.0")
Dot Pitch	Horizontal:0.218mm / Vertical:0.130mm
Phosphor	R, G, B Short Persistence (Hi-Eu RED)
CIE Color point	Red x:0.635(± 0.020) y:0.333(±0.020) Green x:0.280(± 0.020) y:0.595(±0.020) Blue x:0.152(± 0.015) y:0.063(±0.015)
Bulb	DARK TINT
Face	NEW AGRAS COAT
Total Transmission	39.5 %

## 5. ELECTRICAL SPECIFICATIONS

### 5.1 Standard conditions ... Except special items

Display image	Green, full "H" characters with a border line. (7 x 9 dots) Video signal : 100% duty Display area : 380 mm x 285 mm
Video signal level	0.7 V pp
Contrast, Brightness	Contrast : Max., Brightness : Center point
Ambient Temperature	20± 5°C (68 ± 9°F)
Input Voltage	AC 120 V, 60 Hz or AC 220 V 50 Hz
Terrestrial magnetism	Vertical field : northern hemisphere field 40µT (southern hemisphere field -40µT) Horizontal field : no field
Viewing direction	Parallel to the CRT axis
Measurements	After an initial warming up time of more than 30 minutes.
Ambient light	200 ± 50 Ix
Display mode	1600 x 1200 (93.75 kHz, 75.00 Hz)

## 5.2 POWER

### 5.2.1 Power supply ... Commercial power source

Input voltage	AC 90 - 132 V, AC 198 - 264 V
Power frequency	50 Hz ± 3 Hz, 60 Hz ± 3 Hz
Input current	2.7 A Max. (100V)
Inrush current (at 20°C)	40 A op note:Cold Start
Power consumption	160 W (Typ.)

### 5.2.2 Power Management for Power Saving

Power saving system is designed based upon VESA DPMS standard (Version : 1.0)

#### 1) Power consumption and recovery time.

*1 APM State	SIGNALS			MONITOR POWER CONSUMP- TION	RECOVERY TIME TO ON STATE	INDICATOR
	H. Sync	V. Sync	VIDEO			
ON	*3 NOR- MAL	*3 NOR- MAL	*2 ACTIVE	*4 100%	—	Green
STAND- BY	No Sync or *5 >10 Hz	> 40 Hz	BLANK	< 15 W	< 4S	Yellow
SUS- PEND	>10 kHz	No Sync or *5 < 20 Hz	BLANK	< 15 W	< 4S	Yellow
OFF	No Sync or *5 >10 Hz	No Sync or *5 < 20 Hz	BLANK	< 8 W	< 20S	Yellow

\*\* The transition time from ON state to each APM states is 5 seconds minimum.

\*1 : APM : Advanced Power Management.

\*2 : Means. Condition of power consumption for ON state.

DISPLAY IMAGE : WHITE full "H" characters with a border line (7 X 9 dots).

\*3 : NORMAL : See "5.4 ACCEPTABLE TIMING".

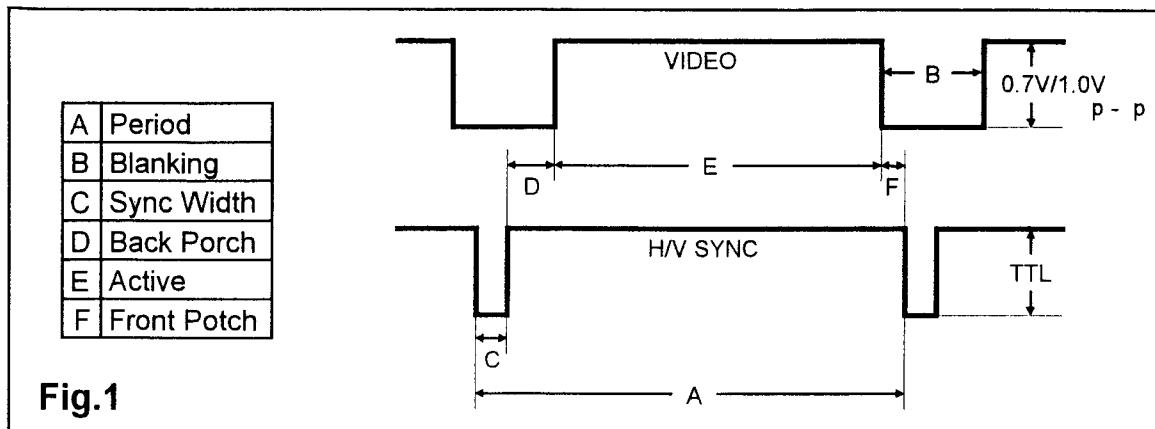
\*4 : Power Consumption is measured at AC 100-240V. (note:7W Typ. at AC 230V / 50 Hz)

\*5 : Power saving operation is done at least less than specified value in the list.

### 5.3 Standard timing

- Following 1 mode is preset in the memory as standard timing at the factory and 7modes are reserved.
- Fig-1 shows a definition of timing and signal level.
- Electrical performance is specified based on 1600 x 1200 mode unless otherwise mentioned.

# TIMING CHART



	PRESET		RESERVATION	
	MODE - 1		MODE - 2	
	1600 × 1200 (75)	640 × 480 (60)	800 × 600 (75)	49.5000 MHz
DOT CLOCK	202.5000 MHz	25.1750 MHz	49.5000 MHz	
f H	93.7500 kHz	31.4688 kHz	46.8750 kHz	
H	A - PERIOD 10.667 µs ( 2,160 dots )	31.778 µs ( 800 dots )	21.333 µs ( 1,056 dots )	
	B - BLANKING TIME 2.765 µs ( 560 dots )	6.356 µs ( 160 dots )	5.172 µs ( 256 dots )	
	C - SYNC WIDTH 0.948 µs ( 192 dots )	3.813 µs ( 96 dots )	1.616 µs ( 80 dots )	
	D - BACK PORCH 1.501 µs ( 304 dots )	1.946 µs ( 49 dots )	3.232 µs ( 160 dots )	
	E - ACTIVE TIME 7.901 µs ( 1,600 dots )	25.422 µs ( 640 dots )	16.162 µs ( 800 dots )	
	F - FRONT PORCH 0.316 µs ( 64 dots )	0.596 µs ( 15 dots )	0.323 µs ( 16 dots )	
f V	75.0000 Hz	59.9405 Hz	75.0000 Hz	
V	A - PERIOD 13.333 ms ( 1,250 lines )	16.683 ms ( 525 lines )	13.333 ms ( 625 lines )	
	B - BLANKING TIME 0.533 ms ( 50 lines )	1.430 ms ( 45 lines )	0.533 ms ( 25 lines )	
	C - SYNC WIDTH 0.032 ms ( 3 lines )	0.064 ms ( 2 lines )	0.064 ms ( 3 lines )	
	D - BACK PORCH 0.491 ms ( 46 lines )	1.176 ms ( 37 lines )	0.448 ms ( 21 lines )	
	E - ACTIVE TIME 12.800 ms ( 1,200 lines )	15.253 ms ( 480 lines )	12.800 ms ( 600 lines )	
	F - FRONT PORCH 0.011 ms ( 1 lines )	0.191 ms ( 6 lines )	0.021 ms ( 1 lines )	
SYNC POLARITY(H/V)	Positive / Positive	Negative / Negative	Positive / Positive	

	RESERVATION		RESERVATION	
	MODE - 4		MODE - 5	
	1024 × 768 (75)	MAC 1152 × 870 (75)	1280 × 1024 (60)	108.5000 MHz
DOT CLOCK	78.7500 MHz	100.0000 MHz	108.5000 MHz	
f H	60.0229 kHz	68.6813 kHz	63.9741 kHz	
H	A - PERIOD 16.660 µs ( 1,312 dots )	14.560 µs ( 1,456 dots )	15.631 µs ( 1,696 dots )	
	B - BLANKING TIME 3.657 µs ( 288 dots )	3.040 µs ( 304 dots )	3.834 µs ( 416 dots )	
	C - SYNC WIDTH 1.219 µs ( 96 dots )	1.280 µs ( 128 dots )	1.180 µs ( 128 dots )	
	D - BACK PORCH 2.235 µs ( 176 dots )	1.440 µs ( 144 dots )	2.065 µs ( 224 dots )	
	E - ACTIVE TIME 13.003 µs ( 1,024 dots )	11.520 µs ( 1,152 dots )	11.797 µs ( 1,280 dots )	
	F - FRONT PORCH 0.203 µs ( 16 dots )	0.320 µs ( 32 dots )	0.590 µs ( 64 dots )	
f V	75.0286 Hz	75.0616 Hz	60.0132 Hz	
V	A - PERIOD 13.328 ms ( 800 lines )	13.322 ms ( 915 lines )	16.663 ms ( 1,066 lines )	
	B - BLANKING TIME 0.533 ms ( 32 lines )	0.655 ms ( 45 lines )	0.657 ms ( 42 lines )	
	C - SYNC WIDTH 0.050 ms ( 3 lines )	0.044 ms ( 3 lines )	0.047 ms ( 3 lines )	
	D - BACK PORCH 0.466 ms ( 28 lines )	0.568 ms ( 39 lines )	0.594 ms ( 38 lines )	
	E - ACTIVE TIME 12.795 ms ( 768 lines )	12.667 ms ( 870 lines )	16.006 ms ( 1,024 lines )	
	F - FRONT PORCH 0.017 ms ( 1 lines )	0.044 ms ( 3 lines )	0.016 ms ( 1 lines )	
SYNC POLARITY(H/V)	Positive / Positive	Negative / Negative	Positive / Positive	

RESERVATION		RESERVATION	
MODE - 7		MODE - 8	
1280 × 1024 (75)		1600 × 1200 (70)	
DOT CLOCK	135.0000 MHz	189.0000 MHz	
H	f H	79.9763 kHz	87.5000 kHz
	A - PERIOD	12.504 µs ( 1,688 dots )	11.429 µs ( 2,160 dots )
	B - BLANKING TIME	3.022 µs ( 408 dots )	2.963 µs ( 560 dots )
	C - SYNC WIDTH	1.067 µs ( 144 dots )	1.016 µs ( 192 dots )
	D - BACK PORCH	1.837 µs ( 248 dots )	1.608 µs ( 304 dots )
	E - ACTIVE TIME	9.481 µs ( 1,280 dots )	8.466 µs ( 1,600 dots )
V	F - FRONT PORCH	0.119 µs ( 16 dots )	0.339 µs ( 64 dots )
	f V	75.0247 Hz	70.0000 Hz
	A - PERIOD	13.329 ms ( 1,066 lines )	14.286 ms ( 1,250 lines )
	B - BLANKING TIME	0.525 ms ( 42 lines )	0.571 ms ( 50 lines )
	C - SYNC WIDTH	0.038 ms ( 3 lines )	0.034 ms ( 3 lines )
	D - BACK PORCH	0.475 ms ( 38 lines )	0.526 ms ( 46 lines )
SYNC POLARITY(H/V)	E - ACTIVE TIME	12.804 ms ( 1,024 lines )	13.714 ms ( 1,200 lines )
	F - FRONT PORCH	0.013 ms ( 1 lines )	0.011 ms ( 1 lines )
Positive / Positive		Positive / Positive	

ADJUSTMENT		ADJUSTMENT		ADJUSTMENT	
HV8SA - 1		HV8SA - 2		HV8SA - 3	
DOT CLOCK	22.6000 MHz	84.0000 MHz	144.0000 MHz		
H	f H	29.5039 KHz	51.9802 KHz	73.9979 KHz	
	A - PERIOD	33.894 µs ( 766 dots )	19.238 µs ( 1,616 dots )	13.514 µs ( 1,946 dots )	
	B - BLANKING TIME	6.018 µs ( 136 dots )	4.429 µs ( 372 dots )	3.111 µs ( 448 dots )	
	C - SYNC WIDTH	4.115 µs ( 93 dots )	1.690 µs ( 142 dots )	1.056 µs ( 152 dots )	
	D - BACK PORCH	1.283 µs ( 29 dots )	2.429 µs ( 204 dots )	1.944 µs ( 280 dots )	
	E - ACTIVE TIME	27.876 µs ( 630 dots )	14.810 µs ( 1,244 dots )	10.403 µs ( 1,498 dots )	
V	F - FRONT PORCH	0.619 µs ( 14 dots )	0.310 µs ( 26 dots )	0.111 µs ( 16 dots )	
	f V	48.0520 Hz	87.0690 Hz	126.0612 Hz	
	A - PERIOD	20.811 ms ( 614 lines )	11.485 ms ( 597 lines )	7.933 ms ( 587 lines )	
	B - BLANKING TIME	0.915 ms ( 27 lines )	0.750 ms ( 39 lines )	0.500 ms ( 37 lines )	
	C - SYNC WIDTH	0.102 ms ( 3 lines )	0.058 ms ( 3 lines )	0.041 ms ( 3 lines )	
	D - BACK PORCH	0.712 ms ( 21 lines )	0.673 ms ( 35 lines )	0.446 ms ( 33 lines )	
SYNC POLARITY(H/V)	E - ACTIVE TIME	19.896 ms ( 587 lines )	10.735 ms ( 558 lines )	7.433 ms ( 550 lines )	
	F - FRONT PORCH	0.102 ms ( 3 lines )	0.019 ms ( 1 lines )	0.014 ms ( 1 lines )	
Negative / Negative		Negative / Negative		Negative / Negative	

ADJUSTMENT		
HV8SA - 4		
DOT CLOCK	205.0000 MHz	
H	f H	96.1538 KHz
	A - PERIOD	10.400 µs ( 2,132 dots )
	B - BLANKING TIME	2.673 µs ( 548 dots )
	C - SYNC WIDTH	0.849 µs ( 174 dots )
	D - BACK PORCH	1.493 µs ( 306 dots )
	E - ACTIVE TIME	7.727 µs ( 1,584 dots )
V	F - FRONT PORCH	0.332 µs ( 68 dots )
	f V	165.2128 Hz
	A - PERIOD	6.053 ms ( 582 lines )
	B - BLANKING TIME	0.385 ms ( 37 lines )
	C - SYNC WIDTH	0.031 ms ( 3 lines )
	D - BACK PORCH	0.343 ms ( 33 lines )
SYNC POLARITY(H/V)	E - ACTIVE TIME	5.668 ms ( 545 lines )
	F - FRONT PORCH	0.010 ms ( 1 lines )
Negative / Negative		

#### 5.4 Acceptable timing

- If your timing is within following specification, this CRT display can automatically function with a certain size and position.

Horizontal: Sync frequency: 30.0 ~ 95.0 kHz  
Blanking Time:  $\geq 2.7 \mu\text{s}$   
Back Porch:  $\geq 1.25 \mu\text{s}$   
Front Porch:  $\leq$  Back Porch  
Sync Width:  $\geq 0.948 \mu\text{s}$

Vertical: Sync frequency: 50.0 ~ 160.0 Hz  
Blanking Time:  $\geq 0.5 \text{ ms}$   
Back Porch:  $\geq 0.4 \text{ ms}$   
Sync Width:  $\geq 0.032 \text{ ms}$

- Several items like size, position and distortion can be adjusted through OSD menu, and if you want to keep it, please push the key [1] for memory, or keep the key untouched for about 20 seconds, it is automatically memorized.

NOTE : In case of RECALL, the key is untouched for about 30 seconds, RECALL function will be cancelled.

Please note, however, that there is the case you can not get the size and/or position you want, (for example, in case Display video Time is too short, you can't get bigger size of the image.)

- The CRT adopted in this CRT display is designed to minimize the moire phenomenon at suitable size for typical display modes. However, there might be a display format among many formats, in which the moire phenomenon appears on this display.

#### 5.5 Signal level and input impedance

##### 5.5.1 Video Signal level

- This CRT display is adjusted at the factory using 0.7V p-p Video Signal, Black level is 0V.
- This CRT display is compatible with 1.0V p-p Video Signal by using Video input level selection.

##### 5.5.2 Sync Signal level

- H/V Separate, H/V Mixed : TTL level
- Sync on Green : 0.3 V p-p  $\pm 0.015 \text{ V}$

##### 5.5.3 Input impedance

- Video input:  $75 \Omega$
- Sync input:  $\geq 1 \text{ k}\Omega$

#### 5.6 Display performance

##### 5.6.1 Display area

###### 1) PRESET TIMING

MODE 1, 1600 x 1200 @75Hz

WIDTH : 380 mm  $\pm 5 \text{ mm}$

HEIGHT : 285 mm  $\pm 5 \text{ mm}$

###### 2) RESERVATION TIMING

MODE 2, 640 x 480 @60Hz

WIDTH : 380 mm  $\pm 7 \text{ mm}$

HEIGHT : 285 mm  $\pm 7 \text{ mm}$

MODE 3, 800 x 600 @75Hz

WIDTH : 380 mm  $\pm 7 \text{ mm}$

HEIGHT : 285 mm  $\pm 7 \text{ mm}$

MODE 4, 1024 x 768 @75Hz

WIDTH : 380 mm  $\pm 7 \text{ mm}$

HEIGHT : 285 mm  $\pm 7 \text{ mm}$

MODE 5, 1152 x 870 @75Hz

WIDTH : 380 mm  $\pm 7 \text{ mm}$

HEIGHT : 285 mm  $\pm 7 \text{ mm}$

MODE 6, 1280 x 1024 @60Hz

WIDTH : 355 mm  $\pm 7 \text{ mm}$

HEIGHT : 284 mm  $\pm 7 \text{ mm}$

MODE 7, 1280 x 1024 @75Hz

WIDTH : 355 mm  $\pm 7 \text{ mm}$

HEIGHT : 284 mm  $\pm 7 \text{ mm}$

MODE 8, 1600 x 1200 @70Hz

WIDTH : 380 mm  $\pm 7 \text{ mm}$

HEIGHT : 285 mm  $\pm 7 \text{ mm}$

###### 3) FULL SCAN

WIDTH : 406 mm

HEIGHT : 304 mm

#### 5.6.2 Centering

##### 1) PRESET TIMING (MODE1)

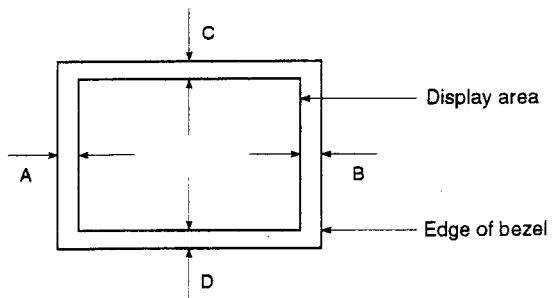
IA - BI  $\leq 4.0 \text{ mm}$

IC - DI  $\leq 4.0 \text{ mm}$

##### 2) RESERVATION TIMING (MODE2~8)

IA - BI  $\leq 7.0 \text{ mm}$

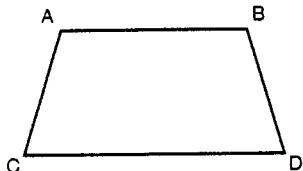
IC - DI  $\leq 7.0 \text{ mm}$



### 5.6.3 Distortion

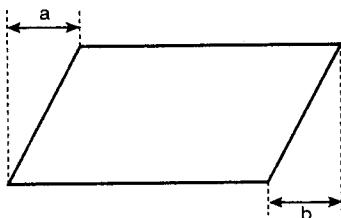
#### 1) Trapezoid

$|AC - BDI| \leq 3.0 \text{ mm}$   
 $|AB - CDI| \leq 2.5 \text{ mm}$



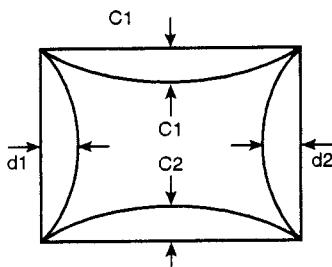
#### 2) Parallelogram

$a, b \leq 2.0 \text{ mm}$



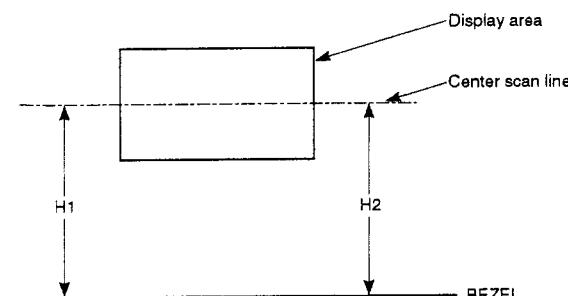
#### 3) Pincushion and Barrel

$|IC1|, |IC2| \leq 2.0 \text{ mm}$   
 $|Id1|, |Id2| \leq 2.0 \text{ mm}$



### 5.6.4 Rotation

$|H1 - H2| \leq 2.5 \text{ mm}$



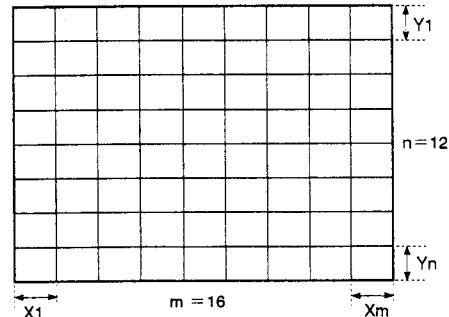
### 5.6.5 Linearity

#### Horizontal linearity

$$= \frac{X_{\max.} - X_{\min.}}{X_{\max.} + X_{\min.}} \times 100 \% \leq 7 \%$$

#### Vertical linearity

$$= \frac{Y_{\max.} - Y_{\min.}}{Y_{\max.} + Y_{\min.}} \times 100 \% \leq 6 \%$$



#### <Conditions>

Display image ----- crosshatch pattern

Maximum and minimum values should not be adjacent to each other.

X max. is maximum value among  $X_1 \sim X_m$   
 X min. is minimum value among  $X_1 \sim X_m$

Y max. is maximum value among  $Y_1 \sim Y_n$   
 Y min. is minimum value among  $Y_1 \sim Y_n$

## 5.7 General performance

### 5.7.1 Maximum pixel clock

202.5 MHz

### 5.7.2 Maximum luminance

Value	100 cd/m² (min.) for 5% white field at the center of the display area. 90 cd/m² (min.) for 100% white field at the center of the display area. Specified by 9300 K + 8 MPCD
Conditions	Display image : White flat field Luminance : Max. (Contrast : Max.) (Brightness : Center point)

### 5.7.3 Minimum luminance

Value	≤ 17 cd/m² at the center of the display area. Specified by 9300 K + 8 MPCD
Conditions	Display image : White full flat field Luminance : Min. (Contrast : Min.) (Brightness : Center point)

#### 5.7.4 Brightness variation

Value	75 % (Min.) Variation = C/A X 100
Conditions	Display image : White full flat field Luminance : 100cd / m <sup>2</sup> at the center of display area A ; Luminance at center position C ; Luminance at position of lowest brightness

#### 5.7.5 Display area regulation

	Display area variation	Range of variation
Due to Luminance	within 1.0 %	17~100 cd/m <sup>2</sup> (white flat field)
Due to Power Supply	within 0.5 %	AC : 90-132 V or 198-264 V
Due to Temperature	within 1.5%	20 ° C ± 20° C

#### 5.7.6 Color Point

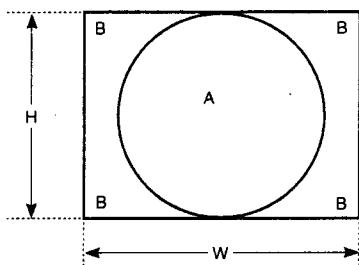
##### < Conditions >

Display image : White flat field at the center of the display area.  
Luminance : Brightness center point.

Contrast	max	min
Value	9300 K + 8 MPCD $x = 0.283 \pm 0.020$ $y = 0.298 \pm 0.020$	9300 K + 8 MPCD $x = 0.283 \pm 0.020$ $y = 0.298 \pm 0.020$

#### 5.7.7 Misconvergence

Center area of display (A) : 0.30 mm (Max.)  
Corner area of display (B) : 0.40 mm (Max.)



##### < Conditions >

Display image : Crosshatch pattern mixed with R, G and B colors.  
Convergence gauge : KLEIN CM7AG or equivalent.  
Display area : W x H 380 x 285 mm

#### 5.7.8 White Uniformity

$$xa - xc \leq \pm 0.015$$

xa:x coordinate at CRT center

xc:x coordinate at the any other point

$$ya - yc \leq \pm 0.015$$

ya:y coordinate at the CRT center

yc:y coordinate at the any other point

##### < Conditions >

Display : White flat field

Luminance : 100 cd/m<sup>2</sup> at the center of display area

Display area: 380 x 285 mm

#### 5.7.9 Purity

Conspicuous mislanding shall not be visible within display area at a distance of 60cm from CRT surface.

##### < Conditions >

Display image : Red / Green / Blue flat field and White field

Luminance : Contrast max, Brightness Center point

Display area : 380 x 285 mm

#### 5.7.10 Jitter

Invisible at a distance of 60 cm from CRT surface.

## 6. ENVIRONMENTS

### 6.1 Ambient temperature, humidity and altitude

	Operating	Storage and shipment
Temperature	0 ~ 40° C (32 ~ 104° F)	-20 ~ +60° C (-4 ~ 140° F)
Humidity	5 ~ 90 % *	5 ~ 90 % *
Altitude	3,000 m (Max.) (10,000 ft)	12,000 m (Max.) (40,000 ft)

\* Non - condensation

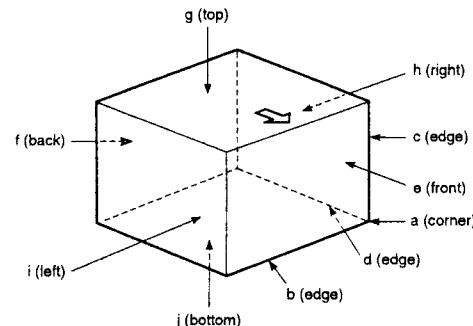
## 6.2 Vibration and shock

### 6.2.1 Vibration

	Order of tests	Direction of vibration		Acceleration		Frequency	Sweep	Test time		
				Non-operation	Storage and shipment					
Unpacked	1	Vertical	Up to down	2.9 m/s <sup>2</sup> (0.3 G)		5 - 55 Hz	120 s	30 min.		
	2	Horizontal	Front to back					15 min.		
	3		Right to left							
Packed	1	Vertical	Up to down		10 m/s <sup>2</sup> (1.0 G)	5 - 50 Hz	810 s Logsweep	40 min.		
	2	Horizontal	Front to back		5 m/s <sup>2</sup> (0.5 G)			20 min.		
	3		Right to left							

### 6.2.2 Shock (Drop test)

Unpacked	20 G One time for each face (6 faces) (non-operation)			
Packed	Order of drop	Face to drop is to face the floor. (See the figure)	Height	Number of drop
	1	a, b, c, d, e, g, h, i	31 cm	1 time for each
	2	j	50 cm	



## 7. REGULATORY STANDARDS

### 7.1 Safety standards

Applicable standards

UL 1950, Listing

CSA 22.2 No. 950, Products Certification

TÜV (EN60950, IEC950) / GS (ZH1)

NORDIC (SEMKO, NEMKO, DEMKO, FIMKO)

### 7.2 X-ray standards

Applicable standards

DHHS, 21CFR Subchapter J

PTB, Approval

HWC

### 7.3 EMC standards

Applicable standards

VCC I class II

FCC: FCC part 15, subpart B, class-B

CISPR22 class B (EN55022)

CE Marking

<EMI test pattern>

White, full "H" characters (9x14 dots), block (12x24

dots)

## 8. OTHERS

Applicable programs

Energy Star

MPR II

TCO'92

ISO9241-3 (Ergonomics)

## 9. POWER CORD

- Northern Hemisphere Version ... UL/CSA approved power cord (North America and Japan) (Wall Type)
- European Version ... VDE approved power cord (PC Type)
- Australia, New Zealand Version ... None

## 10. SIGNAL CABLE

Signal cable with Mini D-Sub 15P connectors at both ends.

Length : 1.5 meter (4.92 feet)

## 11. RELIABILITY

>55,000hrs (demonstrated MTBF)

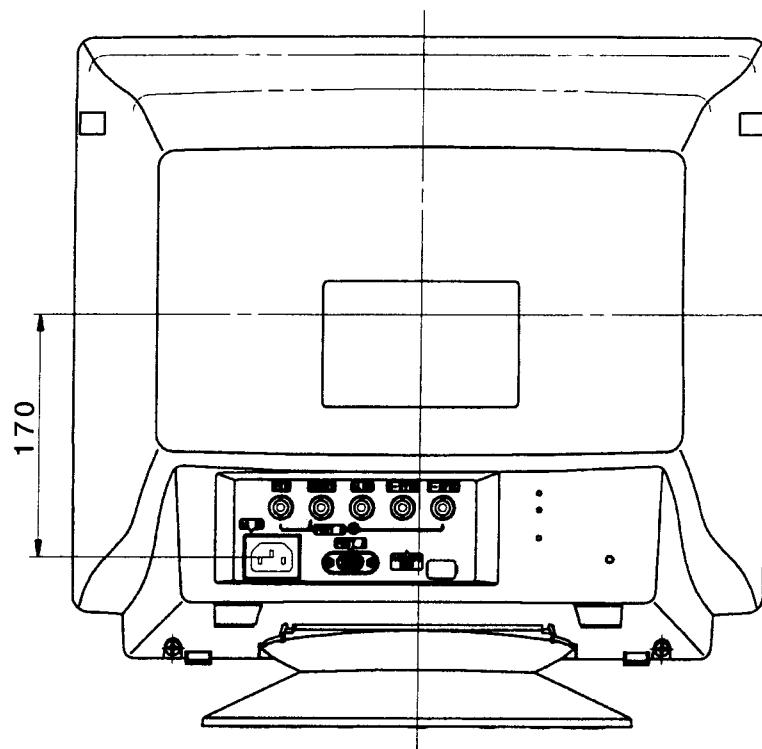
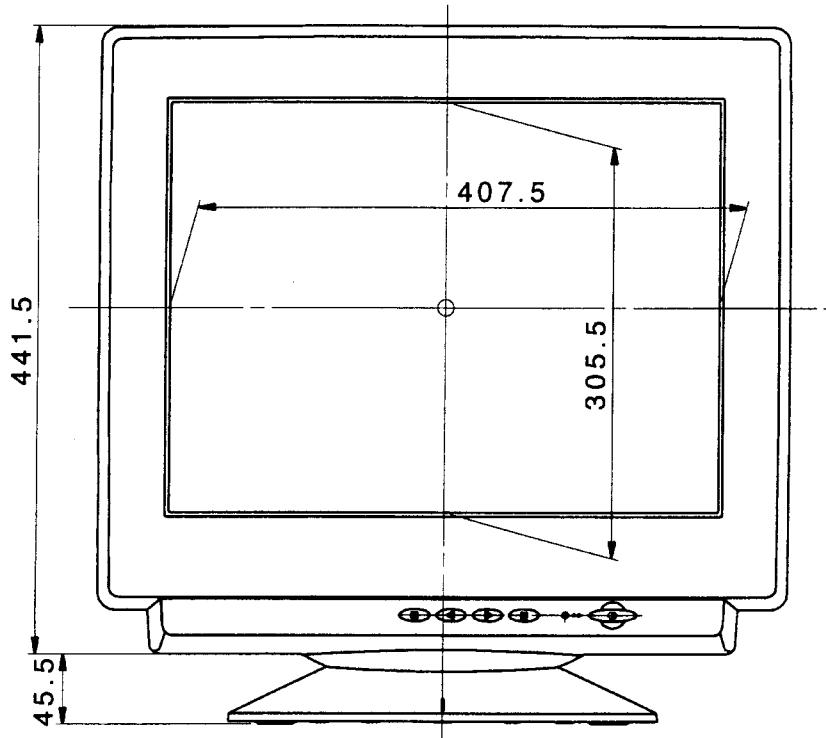


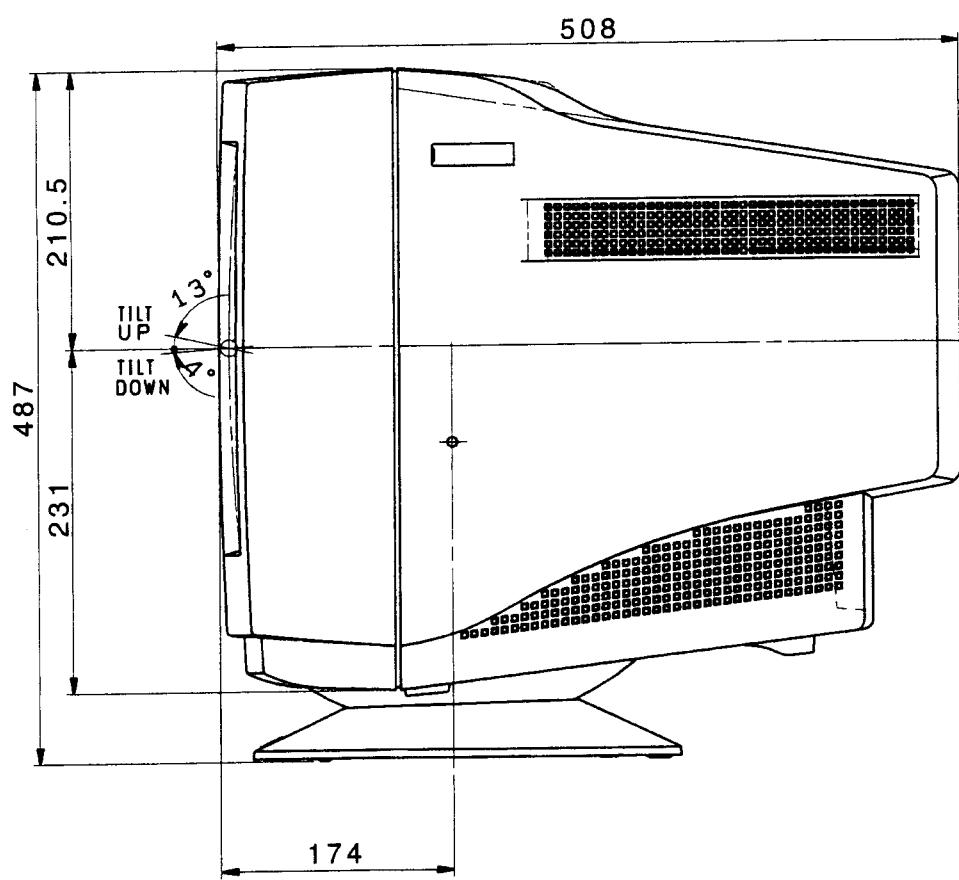
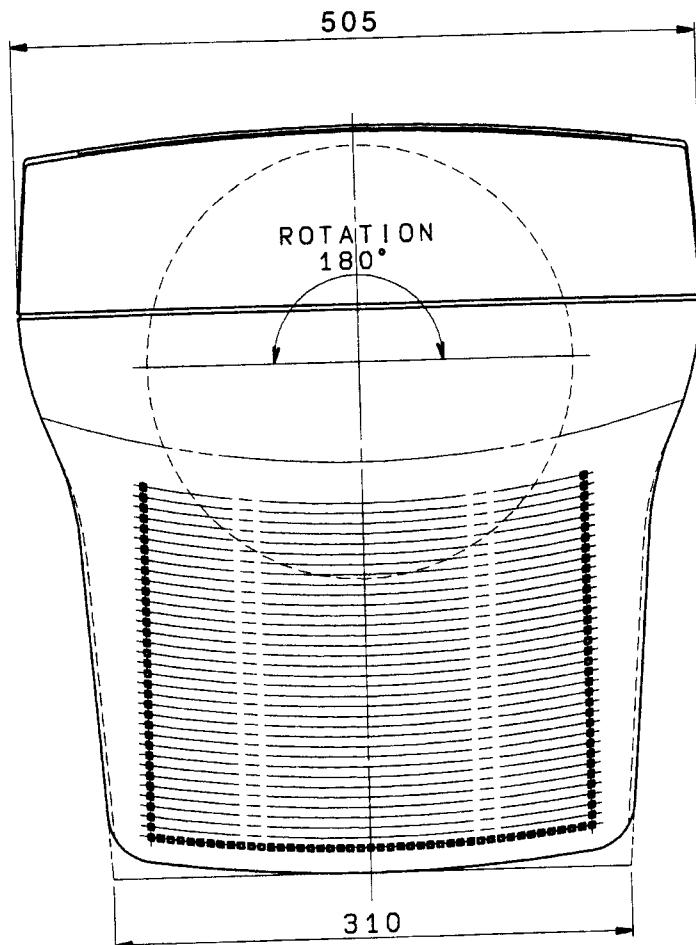


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## DIMENSIONS

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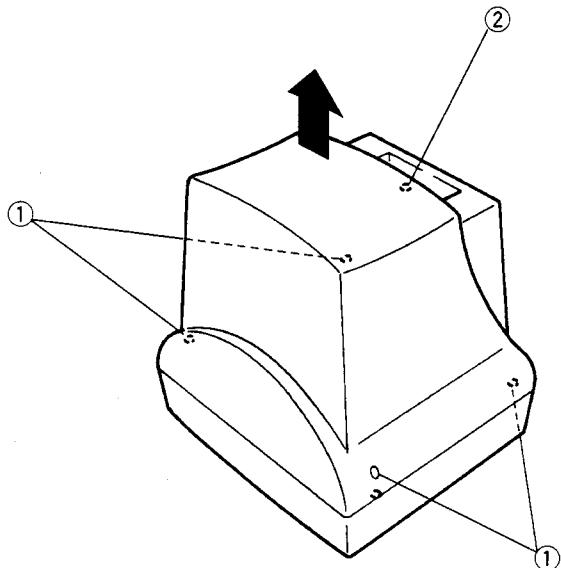
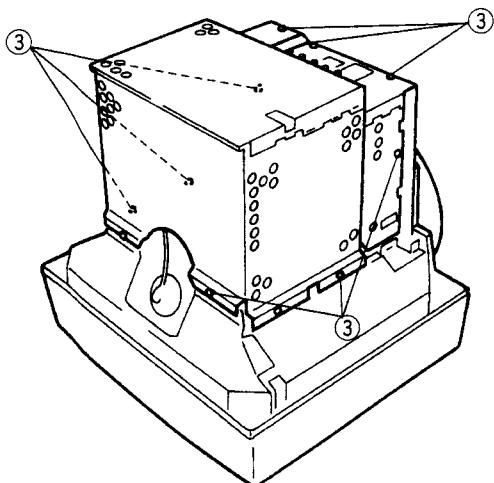


# DISASSEMBLY INSTRUCTIONS

## 1. Rear cover removal

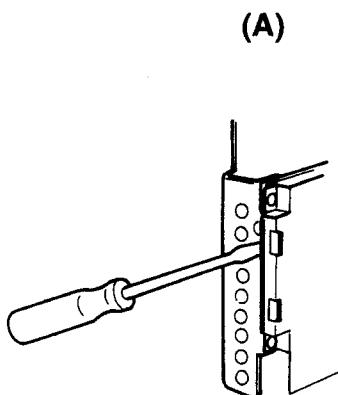
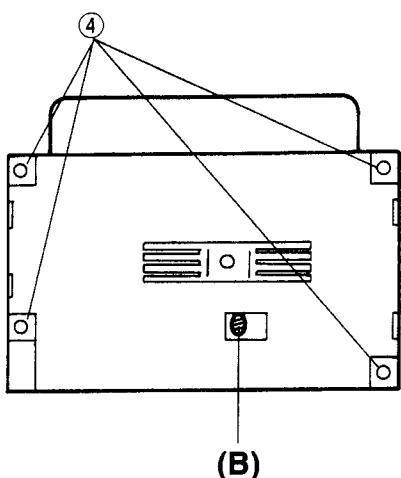
*Note: Spread a mat underneath to avoid damaging the CRT surface.*

- 1) Remove four large screws ① and small screw ② from the rear cover.
- 2) Remove the cover.
- 3) Remove nine screws ③ from the shield case.
- 4) Remove the shield case.

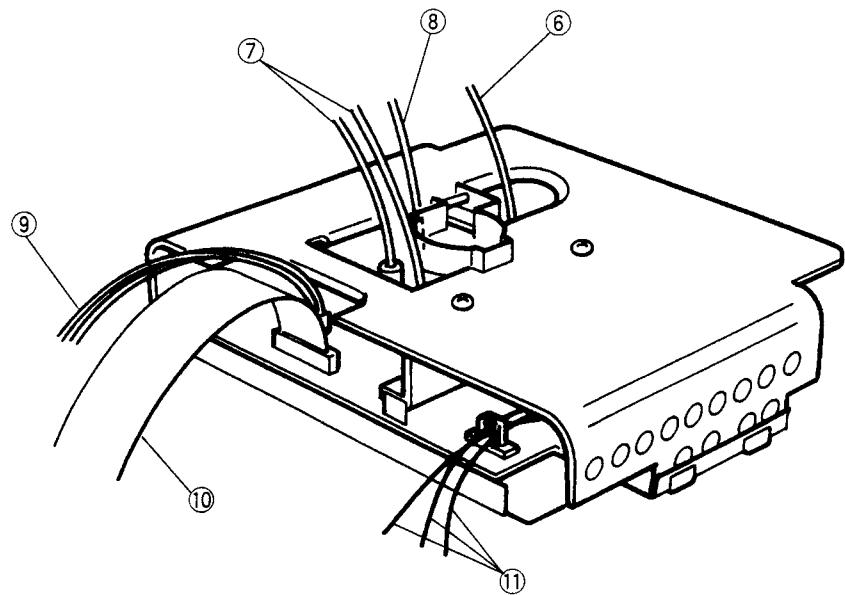
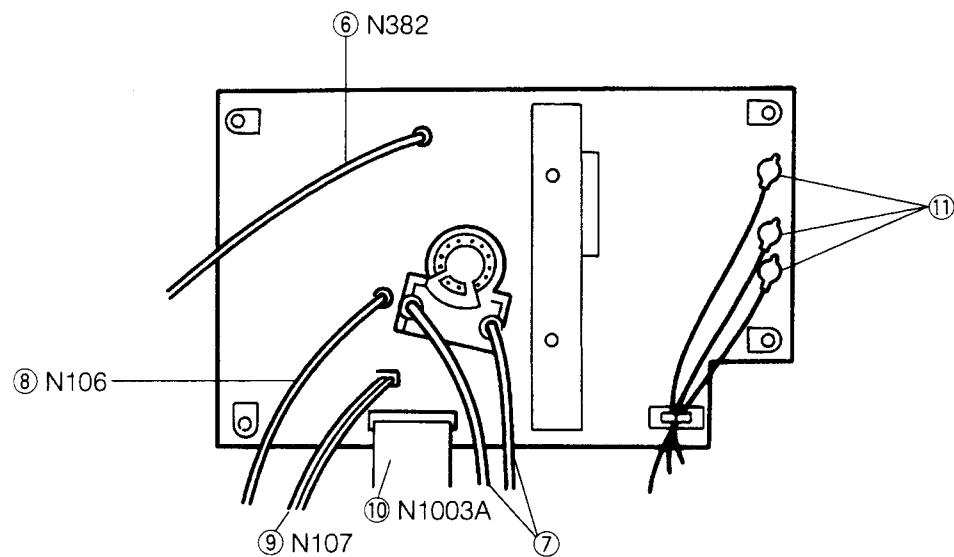
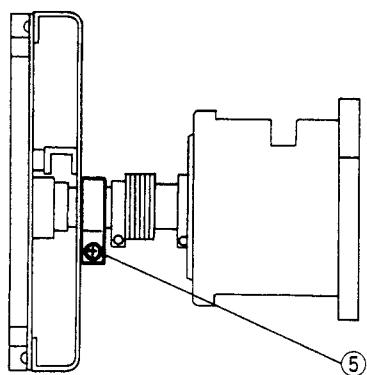


## 2. Video PCB removal

- 1) Remove four screws ④ securing the shield cover.
- 2) Desolder (B) and Remove the shield cover (A).

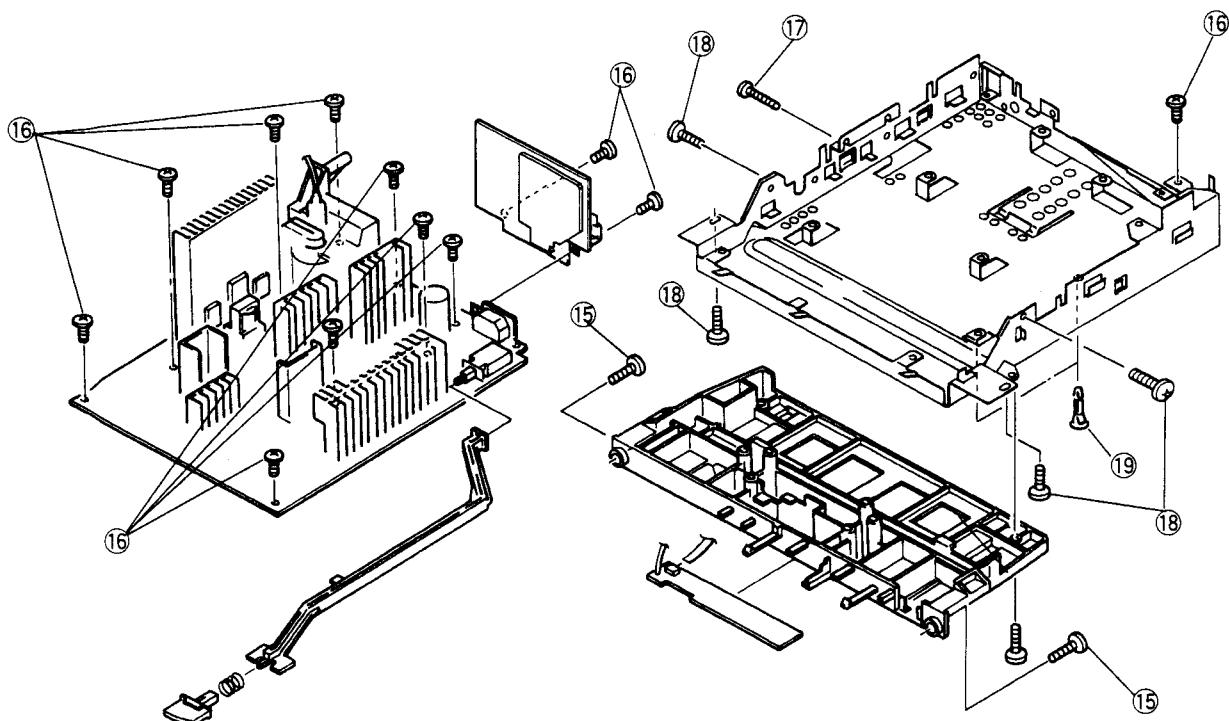
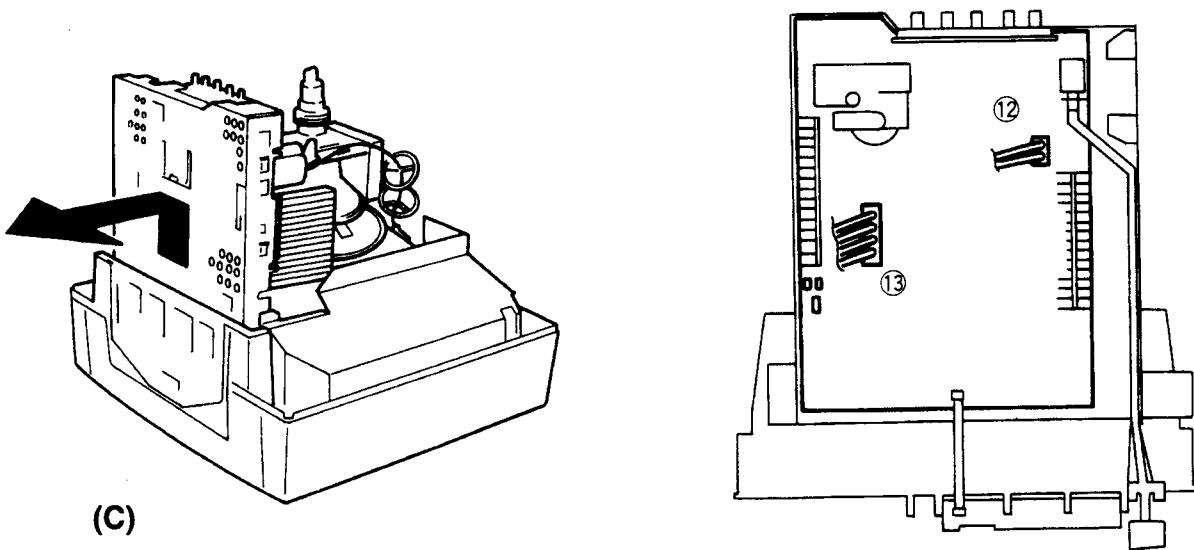


- 3) Loosen the screw ⑤ securing the CRT neck and the shield case.
- 4) Remove the PCB block from the CRT.
- 5) Remove the N382 connector ⑥.
- 6) Remove two focus leads ⑦.
- 7) Remove ground connector ⑧ (N106) connected to the PCB.
- 8) Remove N107 connector ⑨.
- 9) Remove N1003A connector ⑩.
- 10) Remove RGB connector ⑪.
- 11) Remove the PCB from the shield case.



### 3. Main PCB Removal

- 1) Remove the connector ⑫ (N802) of the degauss coil.
- 2) Remove the DY connector ⑬.
- 3) Remove the anode cap.
- 4) Move the CRT face down and remove two screws ⑮ securing the bottom fitting metal.
- 5) Remove the fitting metal and the PCB from the cabinet. (C)
- 6) Remove twelve screws ⑯ securing the fitting metal and PCB.
- 7) Remove screw ⑰ securing the fitting metal and PCB.
- 8) Remove four screws ⑱ securing the fitting metal and PCB.
- 9) Remove two clamps ⑲ the fitting metal and PCB.
- 10) Remove the PCB with the figure referenced.



# CONTROL LOCATION

## Basic operation of parts

Control panel

Names of control

Functions

To display main menu: quit menu. Store change data in the memory.

Selected or switch change data.

To switch on and off the display unit.

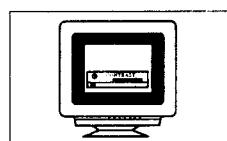
Lights when power switch is pressed; goes out when it is pressed again.  
Operation / Display of the Power Saving Function.

\* For a detailed description of the functions of the ① key, ② key, and ③ key, refer to the next section onward.

## Examples of on-screen operation

### A. Contrast adjustment

Display changes



1. Display the contrast adjustment menu using the ② key or ③ key.

On-screen display changes

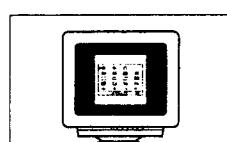
< Contrast menu >



2. Set the desired state using the ② key or ③ key. If the ① key is pressed, the set data is stored in the memory and the menu screen is cleared.

### B. H. size adjustment

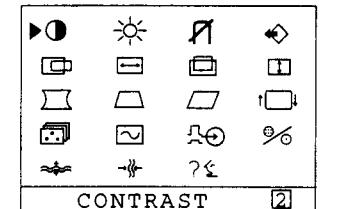
Display changes



1. Call the main menu on the screen by pressing the ① key.

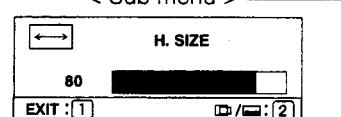
On-screen display changes

< Menu >



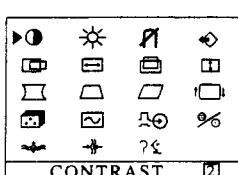
2. Move to cursor to H. SIZE using the ② key or ③ key, then press the ④ key to select.

< Sub menu >



3. Set the desired state using the ② key or ③ key. If the ①(EXIT) key is pressed, the set data is stored in the memory and the menu screen is cleared.

Main menu



CONTRAST	BRIGHTNESS	DEGAUS	RECALL
H.POSITION	H.SIZE	V.POSITION	V.SIZE
V.PINCUSHION	TRAPEZOID	PARALLELOGRAM	ROTATION
COLOR SELECT	DISPLAY FREQUENCY	VIDEO INPUT LEVEL	VIDEO INPUT SELECT
H.MOIRE	V.MOIRE	LANGUAGES	
<b>CONTRAST</b>			

## CAUTION FOR ADJUSTMENT AND REPAIR

1. Degaussing is inevitably required at purity adjustment or convergence adjustment.
2. If you check or adjust electrical specification or function, more than 20 minutes burn-in is required.
3. Reforming of the lead wire is required after your repair work.
4. Prior to starting work, be sure to check that the input signal is at the specified timing and that the polarity is as specified in all modes.
5. Brightness control: After mounting the rear cover, brightness tends to decrease about 5 cd/m<sup>2</sup> on a flat white field and about 1 cm/m<sup>2</sup> on a white raster field. This should be taken into consideration.
6. Brightness stabilizing time: It takes about 20 to 50 seconds for the brightness to stabilize after turning the power off for 5 seconds (AC). Therefore, care should be taken to this.
7. Aging should be made in white raster of 30 ~ 50 cd/m<sup>2</sup> and raster size, 402 x 301 mm before adjusting the ITC.
8. Set the CONTRAST to MAX and BRIGHTNESS to CENTER using the O.S.D.

## CAUTION FOR SERVICING

When servicing or replacing the CRT, high voltage sometimes remains on the anode. So, completely discharge high voltage before servicing or replacing the CRT so as to prevent a shock to the service person.

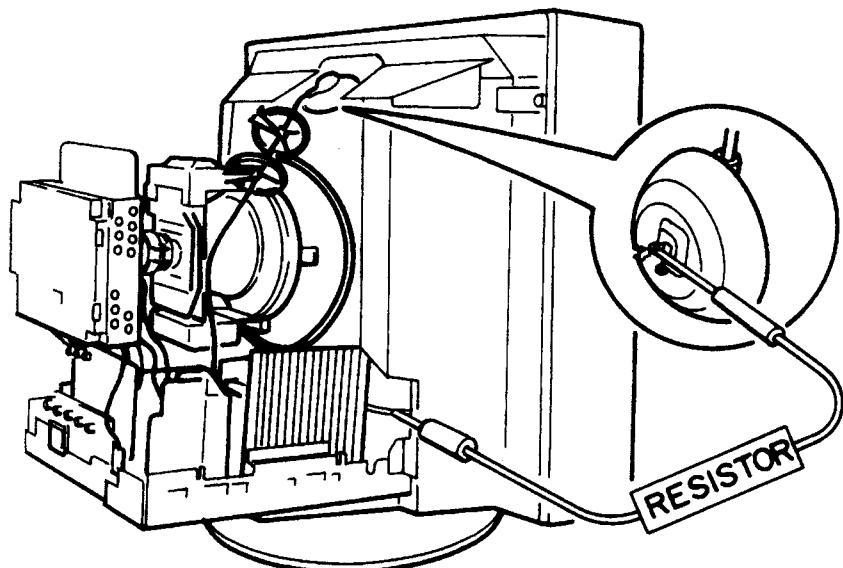
### CRT Anode Discharge

1. When you check the CRT anode or replace the CRT, discharge the CRT anode to the external conductive coating (quadaq) of CRT, especially when checked right after power turn-off.
2. Ground one end of a jumper wire which has a resistor (30 kV < resisting pressure 100 MΩ) and connect the other point to the CRT anode.

*Note: Grounding must be done first.*

This model has a section that does not share a common ground with the power supply section. The different sections are referred to as the HOT section and the COLD section in the precautions below.

1. Do not touch the HOT section and the COLD section at the same time. You may be hit by an electric shock.
2. Do not short the HOT section to the COLD section. This could blow the fuse or damage parts.
3. Never measure the HOT section and the COLD section at the same time when using tools such as oscilloscopes or multimeters.
4. Always unplug the unit before beginning any operation such as removing the chassis.



# ADJUSTMENT AND CHECK PROCEDURE

## INTRODUCTION

- This monitor is controlled by a microcomputer. With the exception of purity/convergence/focus all is digitally adjusted.
- Therefore a computer, the dedicated control software, the dedicated interface, a 9~12 V power supply, and a signal generator are required servicing.

## TOOLS REQUIRED

- Computer**  
The control software is IBM PC compatible only. Therefore, it is not compatible with any other operating systems. For further information please contact our sales office.
- Control Software**  
The HV8SA chassis can only use adjustment program disk for this model. No other program can access the EEPROM on the monitor. For further information please contact our sales office.

### • Interface

The interface is dedicated to work only with the control software and the HV chassis. There are no substitutes for this interface. For further information please contact our sales office.

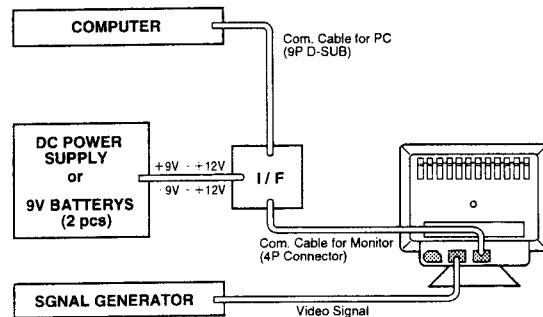
### • Power Supply

A DC 9~12 V (+9~12 V/-9~12 V) power supply is required for operating the interface.

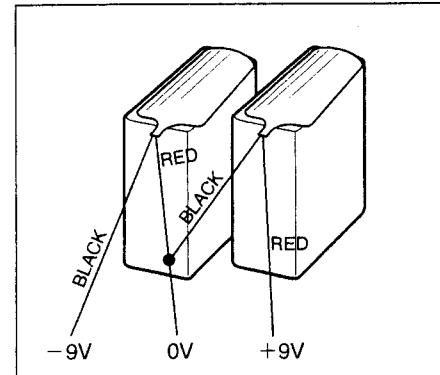
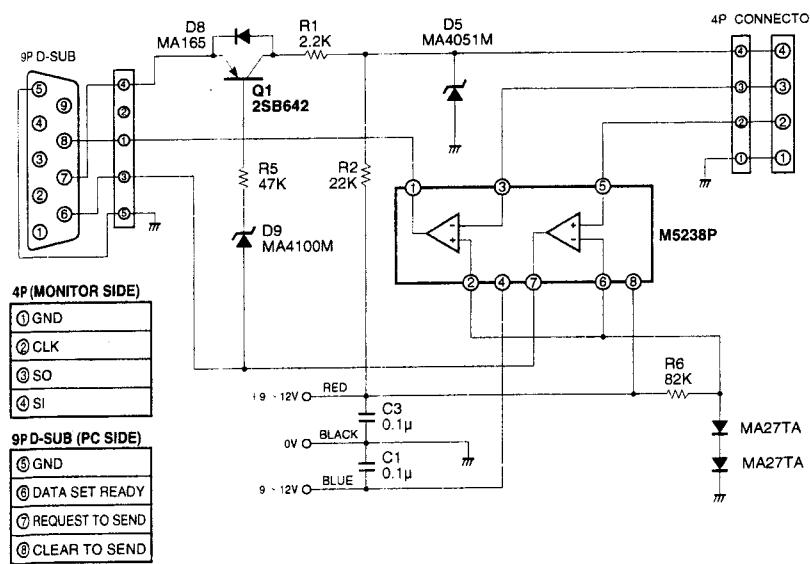
### • Signal Generator

It is necessary for you to use a signal generator which operates on fH 95 kHz, fv 160 Hz, and fc 200 MHz bands.

## INTERFACE CONNECTION



INTERFACE SCHEMATIC DIAGRAM



BATTERY CONNECTION

## OTHER TOOLS

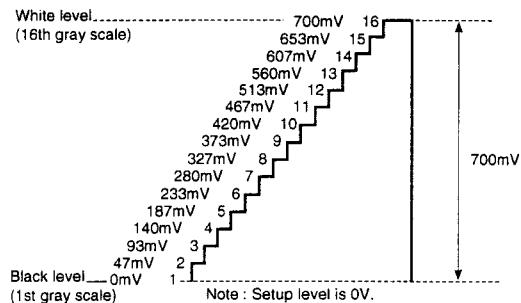
- Oscilloscope (dual trace)
- Scope probe – Attenuation: 100:1  
Attenuation: 10:1
- Digital Voltmeter – Range: 0 to 1000 V DC  
Accuracy: 0.1 %
- TV color Analyzer II – that reads luminance and chromaticity X and Y coordinates.
- Digital High Voltmeter
- AC power supply – Output voltage : 0 to 300 V
- Degaussing coil
- Convergence meter
- Scale
- Double-faced scale
- Microscope – Scale factor: 50
- White lacquer (Paint)

## STANDARD CONDITION OF ADJUSTMENT

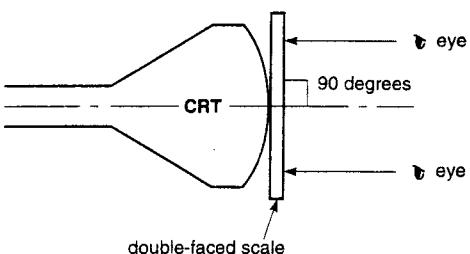
### PROCEDURE

- Signal timing : Standard timing 1600 x 1200 (See page 5)
- Display pattern : White, full "H" character
- Signal level : V/H: TTL level video: 700 mV
- Input source : AC 120 V, 60 Hz
- Ambient temperature : Room temperature
- Warm-up time : More than 30 minutes
- Brightness control : Center
- Contrast control : Max.
- Magnetic field : Vertical: 40  $\mu$ T  
Horizontal: 0  $\mu$ T
- Signal cable : Attached

Video input signal from PC.



- Use a Helmholtz device to adjust an unit with no horizontal magnetic field and a vertical field of 40  $\mu$ T. Inspect the unit under the same conditions.
- The ambient illuminance must be 200 lux.
- Use an external degaussing coil any time the DEGAUSS switch does not remove color shading.
- To check the image width, height, linearity and distortion, proceed as below.



Measure level with respect to tube axis.

# ADJUSTMENT SOFTWARE

## 1. Software operating procedure

- A) Power on the computer.
- B) Connect the Ccommunication cable for monitor adjustment.
- C) Insert the adjustment disk into the drive.
- D) At the A:> prompt type "VSR", then press [ENTER].

A function to identify the connected monitor is provided to prevent accidents due to erroneous use of the HV8SA chassis program. If this program is used for any monitor other than the HV8SA, the message reading "This monitor is not an HV8SA chassis. All further activity has been prevented" is displayed and the operation is stopped.

- E) Refer to the adjustment procedures.

## 2. Adjustment Program

Main Menu of Adjustment Program

<<HV8SA ADJUST PROGRAM MAIN MENU>> (e: exit) <Ver *.*>	
1) Load data from FILE	6) Clear User preset
2) Adjust H. OSC freerun	7) Save data to FILE
3) Adjust VSR setting	8) Special ADJUST
4) Adjust OTHER setting	9) Information Service
5) Adjust Factory preset	10) Show Version & Error

Description of Function of Each Menu

### 1) Load Data from File

This transfers the data file from the disk to the EEPROM on the monitor.

### 2) Adjust H. OSC Freerun

To guarantee that the full range of horizontal frequencies operate correctly. The reference oscillation frequency should be set.

### 3) Adjust VSR Setting

To guarantee that the full range of horizontal frequencies operate correctly. The reference voltage and the distortion offset data should be set.

### 4) Adjust Other Setting

This is used to control the brightness and color.

### 5) Adjust Factory Preset

Makes adjustments to the factory presets. This data is also referenced when in modes other than preset mode.

### 6) Clear User Preset

Clear the data written in the user preset domain. There is no data in the user presets when the product shipped from the factory.

### 7) Save Data to File

Transfers the data from the EEPROM on the monitor to a data file on a floppy disk or hard drive. The data file can be named anything as long as it is less than 8 characters long.

### 8) Special Adjust

This menu has the following functions

① Related data is automatically set on the basis of adjustment results to save the time for adjustment.

(Example: Color adjustment applies only to the 9300 K, while 6550 K and user color data are automatically set.)

### 9) Information Service

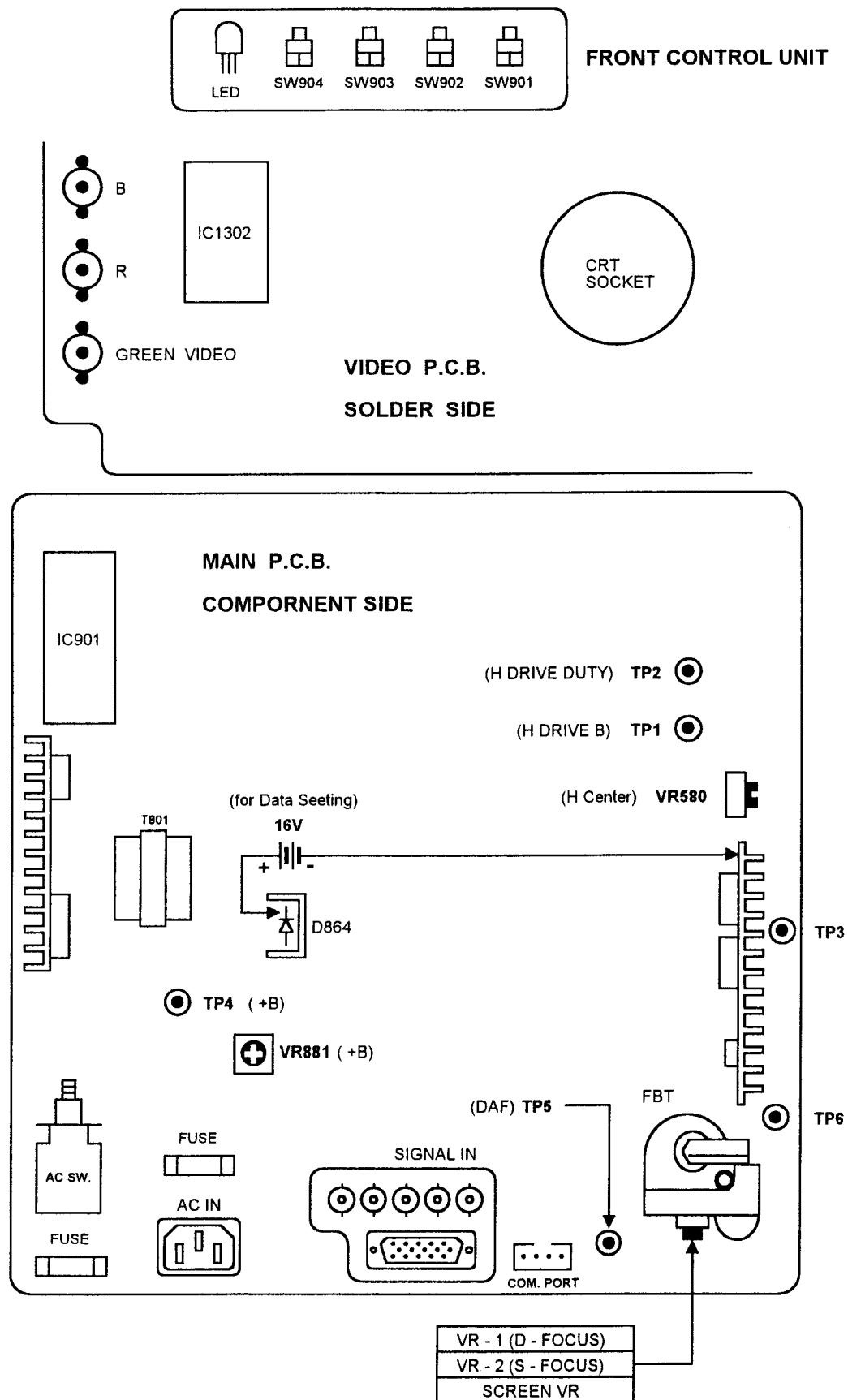
Displays the H/V frequencies that is being supplied to the monitor and gives the operational status of the monitor.

### 10) Show Version and Error

Shows the version of the microprocessor that is in the monitor. Also, if there is an error in the operation of the monitor.

The error is displayed on the screen of the PC.

## SERVICE ADJUSTMENT CONTROL LOCATION



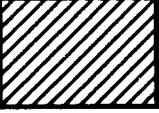
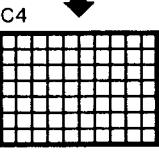
**REQUIRED ADJUSTMENT PROCEDURE AFTER A PARTS IS REPLACED** (✓ IS REQUIRED)

ADJUSTMENT ITEM	MAIN P.C.B.	VIDEO P.C.B.	CRT DY	IC1302 IC1341 IC1307 IC351	IC901	IC820 Q826 Q831 PC821	REPLACED PARTS			
							IC490	IC501	IC532	Q719 Q550 Q855 Q717
A DATA SETTING*							✓			
B +B ADJUST							✓	✓		
C H.FREE RUN							✓			
D H. DRIVE DUTY							✓			
E H. DRIVE +B							✓			
F EHT							✓			
G H. CENTER							✓			
H V. SIZE / POSI DISTORTION							✓			
I H. SIZE / POSI DISTORTION							✓			
J PRESET							✓			
K DAF							✓			
L FOCUS							✓			
M CUT-OFF & BRIGHTNESS							✓			
N DATA SAVING							✓			
PURITY & CONVERGENCE							✓			
SCREEN CHECK							✓			

\* **DATA SETTING :** Do not load standard data except when main PCB and IC901 are replaced.

## ADJUSTMENT PROCEDURE

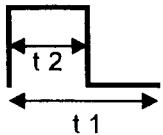
### 1. Description of Adjustment Method

Program Menu Item		◆ Test Meter ↓ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
A	STANDARD DATA SETTING	↓ D864 - GND Refer to service adjustment control location for connect point.	A1		Do not connect the power and signal cable to monitor.	
	1) Load data from FILE		A2		Apply 16V to D864 CATHODE and GND. ( Do not apply 5V to IC901. Because IC833 will supply the 5V and RESET signal to IC901 )	
			A3		Set the cell to the menu at left and press [↓].	
			A4		A message <b>FILE -&gt; EEPROM FILE NAME (q or Q escape) [ ] :</b> is displayed. So key in the DACDATA.DAT (when using the standard data) and press [↓].	
			AE		Disconnect 16V cable, then turn on the power switch of the monitor.	
					<b>Do not load standard data except when Main P.C.B. and IC901 are replaced.</b>	
B	+B ADJUST	◆ Digital voltmeter ↓ TP4 ~ GND □ RGB OFF (SYNC ONLY)	B1 B2	HV8SA-1	Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz]. Make the adjustment to the value shown at right by turning the VR881 on the main PCB.	70V +0.5V - 1.0V
C	H. FREE RUN 2) Adjust H. OSC freerun	□ Crosshatch	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 CE	HV8SA-1 HV8SA-2 HV8SA-3 HV8SA-4	Set the cell to the menu at left and press [↓]. Set the cell to the adjusting mode <u>INTP [0]</u> and press [↓]. Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [↓]. This messages will appear : <b>Hit RETURN-key after adjustment.</b> When the screen image has stabilized, press [↓] <b>Are you sure ?</b> Press [↓] to return to menu of C2.  Input signal [fH 52.0kHz] and [fV 87.0Hz] Select Adjusting mode <u>INTP [1]</u> , and repeat above procedure.  Input signal [fH 74.0kHz] and [fV 126.0Hz] Select Adjusting mode <u>INTP [2]</u> , and repeat above procedure.  Input signal [fH 96.2kHz] and [fV 165.2Hz] Select Adjusting mode <u>INTP [3]</u> , and repeat above procedure.  Press [E] to return to main menu.	C3  C4 

Note 1: Check to be sure that the program disk name is **TXD2162** before making necessary adjustment.

Note 2: Unless otherwise specified, the monitor state is as given at right.

Note 3: The underlined places indicate the adjustment items on the screen of the PC.

Program Menu Item		◆ Test Meter ↓ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
D	<b>H. DRIVE DUTY</b> 3) Adjust VSR setting	◆ Oscilloscope ↓ TP2 ~ GND □ Crosshatch	D1	HV8SA-1	Set the cell to the menu at left and press [↓]. Set the cell to the adjusting mode <u>INTP [0]</u> and press [↓].	 $t_2 + t_1 \times 100 =$ $53\% \pm 2.5\%$
			D2		Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [↓].	
			D3		Set the cell to <u>H. DRIVE DUTY</u> and press [↓].	
			D4		Make the adjustment to the value shown at right by using [←] and [→].	
			D5		Register by pressing [↓] and return to menu of <b>D2</b> by pressing [E].	
			D6			
			D7	HV8SA-2	Input signal [fH 52.0kHz] and [fV 87.0Hz]	$50\% \pm 2.5\%$
			D8		Select Adjusting mode <u>INTP [1]</u> , and repeat above procedure.	
			D9	HV8SA-3	Input signal [fH 74.0kHz] and [fV 126.0Hz]	$49\% \pm 2.5\%$
			D10		Select Adjusting mode <u>INTP [2]</u> , and repeat above procedure.	
			D11	HV8SA-4	Input signal [fH 96.2kHz] and [fV 165.2Hz]	$43\% \pm 2.5\%$
			D12		Select Adjusting mode <u>INTP [3]</u> , and repeat above procedure.	
			DE		Press [E] to return to main menu.	
E	<b>H. DRIVE +B</b> 3) Adjust VSR setting	◆ Digital voltmeter ↓ TP1 ~ GND □ Crosshatch	E1	HV8SA-1	Set the cell to the menu at left and press [↓].	$26.0V \pm 0.3V$
			E2		Set the cell to the adjusting mode <u>INTP [0]</u> and press [↓].	
			E3		Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [↓].	
			E4		Set the cell to <u>H. DRIVE +B</u> and press [↓].	
			E5		Make the adjustment to the value shown at right by using [←] and [→].	
			E6		Register by press [↓] and return to menu of <b>E2</b> by press [E].	
			E7	HV8SA-2	Input signal [fH 52.0kHz] and [fV 87.0Hz]	$22.5V \pm 0.3V$
			E8		Select Adjusting mode <u>INTP [1]</u> , and repeat above procedure.	
			E9	HV8SA-3	Input signal [fH 74.0kHz] and [fV 126.0Hz]	$22.0V \pm 0.3V$
			E10		Select Adjusting mode <u>INTP [2]</u> , and repeat above procedure.	
			E11	HV8SA-4	Input signal [fH 96.2kHz] and [fV 165.2Hz]	$19.0V \pm 0.3V$
			E12		Select Adjusting mode <u>INTP [3]</u> , and repeat above procedure.	
			EE		Press [E] to return to main menu.	

Program Menu Item		◆ Test Meter ↓ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
F	EHT ADJUST 4) Adjust OTHER setting	♦ Digital voltmeter ♦ High Voltage Probe ↓ Anode Cap ~ GND □ RGB off (Sync only)	F1 F2 F3 F4 F5 F6 F7 FE	HV8SA-4	Turn the power switch of the monitor OFF. Connect high voltage probe to Anode Cap and GND.  Turn the power switch of the monitor ON. Set the cell to the menu at left and press [↓]. Check that the input signal to the monitor is [fH 96.2kHz] and [fV 165.2Hz]. Set the cell to EHT and press [↓]. Make the adjustment to the value shown at right by using [←] and [→]. Register by press [↓] after adjustment and return to main menu by press [E].	27.0kV ±0.3kV
G	H. CENTER	□ RGB off (Sync only)	G1 G2 G3	HV8SA-4	Set the Brightness to MAX on the OSD.  Check that the input signal to the monitor is [fH 96.2kHz] and [fV 165.2Hz].  Make the adjustment as shown at right by turning the VR580 on the main PCB.	A      A=B      B  Back raster  Set the raster to the center with respect to the bezel.
H	V. SIZE / POSI and DISTORTION 5) Adjust OTHER setting	□ Crosshatch	H1 H2 H3 HE	Mode-1	Set the cell to the menu at left and press [↓]. Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz] and press [↓]. Set the cell to following items, press [↓] and make the adjustment to the value shown at right by using [←] and [→].  ① * <u>H. SIZE</u> ⑥ <u>V. PCC BARANCE</u> ② * <u>H. POSITION</u> ⑦ <u>PARALLELOGRAM</u> ③ <u>V. SIZE</u> ⑧ <u>TRAPEZOID</u> ④ <u>V. POSITION</u> ⑨ <u>V. LIN (C)</u> ⑤ * <u>V. PCC</u>  H. SIZE, H. POSI and V. PCC is dose not register to interpolation data.  After adjustment, return to the main menu by using [E].	H : 380mm ±5 V : 285mm ±5  H/V Posi : Center  V. LIN(C) : Best point
I	H. SIZE / POSI, V. PCC and V.LIN 3) Adjust VSR Setting	□ Crosshatch	I1 I2 I3 I4	HV8SA-1	Set the cell to the menu at left and press [↓]. Set the cell to the adjusting mode INTP [0] and press [↓].  Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [↓]. Set the cell to following items, press [↓] and make the adjustment to the value shown at right by using [←] and [→].  ① <u>H. SIZE</u> ④ <u>V. PCC CORNER</u> ② <u>H. POSI</u> ⑤ <u>V. LIN (S)</u> ③ <u>V. PCC</u> - To be continued -	H : 380mm ±5 V : 285mm ±5  H/V Posi : Center  V. PCC : V. LIN : Best point

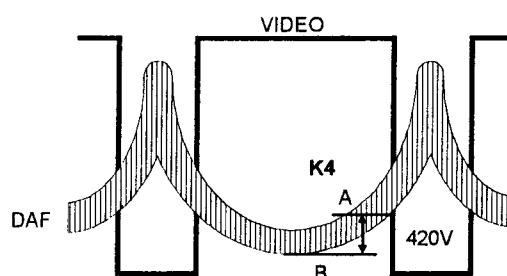
Program Menu Item		◆ Test Meter ↓ Test Point ↓ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
I	H. SIZE / POSI, V. PCC and V.LIN 3) Adjust VSR Setting	↓ Crosshatch	I5 I6 I7 I8 I9 I10 I11 IE	HV8SA-2 HV8SA-3 HV8SA-4	After adjusting the above, return to menu of I2 by using [E]. Input signal [fH 52.0kHz] and [fV 87.0Hz] Select Adjusting mode <u>INTP [1]</u> , and repeat above (I4-I5) procedure. Input signal [fH 74.0kHz] and [fV 126.0Hz] Select Adjusting mode <u>INTP [2]</u> , and repeat above procedure. Input signal [fH 96.2kHz] and [fV 165.2Hz] Select Adjusting mode <u>INTP [3]</u> , and repeat above procedure. After adjustment, return to the main menu by press [E].	H : 380mm ±5 V : 285mm ±5  H/V Posi : Center  V. PCC : V. LIN : Best point
J	PRESET ADJUST 4) Adjust Factory preset	↓ Crosshatch	J1 J2 J3 J4 JE	Mode-1 Mode-1 Mode-1 M2~M8	Set the cell to the menu at left and press [↓]. Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz] and press [↓]. Set the cell to following items, press [↓] and make the adjustment to the value shown at right by using [←] and [→]. ① H. SIZE                ⑤ V. PCC ② H. POSI                ⑥ PARALLEL ③ V. SIZE                ⑦ TRAPEZOID ④ V. POSI Make above adjustment when out of adjusting value by changing input signal to Mode-2~8 and check screen image. After adjustment, return to the main menu by using [E] and [N].	Mode-1 H : 380mm ±5 V : 285mm ±5 Mode-2,3,4,5,8 H : 380mm ±7 V : 285mm ±7 Mode-6,7 H : 355mm ±7 V : 284mm ±7  H/V Posi : Center  V. PCC : Best point
K	DAF ADJUST 8) Special ADJUST Oscilloscope Range 2μs/div.	↓ White flat field ◆ Oscilloscope ↓ TP5~GND 100:1 probe ↓ N1001B(2) ~ GND 10:1 probe	K1 K2 K3 K4 KE	Mode-1	Set the cell to the menu at left and press [↓]. Select the <u>3: ADJUST H.DAF GAIN</u> . Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz]. Adjust as shown at right by using [←] and [→]. Press [E] to return to menu of K2 and return to main menu by press [E] [↓].	420V ±10V Refer to Fig.K for adjustment.

Fig.K

Adjusting Value of K4

K4 : Set to voltage A B

A : Closing VIDEO and DAF  
B : Bottom of DAF



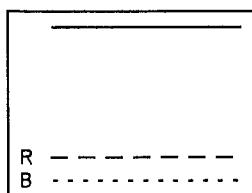
Program Menu Item		◆ Test Meter □ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
L	FOCUS	□ Character	L1 L2 L3 L4	Mode-1	<p>Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz].</p> <p>Make the corner sections of the screen optimum by turning FOCUS VR 1 on the FBT.</p> <p>Make the center section optimum by turning FOCUS VR 2 on the FBT.</p> <p>Repeat L2 and L3 to make it optimum.</p>	
M	CRT CUT-OFF 4) Adjust OTHER setting	◆ TV Color Analyzer II □ RGB Off (Sync only)	M1 M2 M3 M4 ~ M14	Mode-1	<p>Set the Contrast to MAX, Brightness to Center and Color is 9300K by using the OSD.</p> <p>Check that the input signal to the monitor is [fH 93.8kHz], [fV 75.0Hz] and turn off the RGB signal.</p> <p>Set the cell to the menu at left and press [<left>].</left></p> <p>Make the adjustment <u>R,G and B Low Light</u> by using [<left>], [<right>] and Screen VR to CRT cut-off.</right></left></p> <p><b>Please refer to flow chart for this adjustment on page 31.</b></p>	
M	BRIGHTNESS & COLOR ADJUST	□ White window (5cm×5cm at the center)	M15 M16 M17 M18	Mode-1	<p>Change to the pattern at left.</p> <p>Move the cell to the following items and make the adjustment to the value shown at right by using [<left>] and [<right>].</right></left></p> <p><u>R. SUB CONT 9300K</u> <u>G. SUB CONT 9300K</u> <u>B. SUB CONT 9300K</u></p> <p>Set CONTRAST to MIN by using the OSD.</p> <p>Move the cell to the following items and make the adjustment to the value shown at right by using [<left>] and [<right>].</right></left></p> <p><u>R. LOW LIGHT</u> <b>Adjust two colors only</b> <u>G. LOW LIGHT</u> <b>out of these (RGB) three as</b> <u>B. LOW LIGHT</u> <b>shown in M12 on page 31.</b></p>	$Y=110 \text{ cd/m}^2$ $x=0.283 \pm 0.020$ $y=0.298 \pm 0.020$
M	ABL	□ White flat field (full window)	M19 M20 M21 M22 M23 M24	Mode-1	<p>Set CONTRAST to MAX by using the OSD</p> <p>Check the value shown at right, then</p> <p>If out of range, to repeat M16~M20.</p> <p>Set CONTRAST to MAX by using the OSD</p> <p>Change to the pattern at left.</p> <p>Move the cell to <u>ABL 9300K</u> and make the adjustment to the value shown at right by using [<left>] and [<right>].</right></left></p> <p>Press [E] to return to main menu.</p>	$x=0.283 \pm 0.020$ $y=0.298 \pm 0.020$
					<b>- To be continued -</b>	

Program Menu Item		◆ Test Meter ↓ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
M	DATA SETTING 8) Special ADJUST	◆ TV Color Analyzer II  □ White window (5cm×5cm at center) 1.0V p-p video	M25	Mode-1	Set the cell to the menu at left and press [↓]. Select the <u>2: ADJUST COLOR</u> from the menu. This messages will appear : <b>Calculate COLOR 6550K data automatically . OK ? &gt;</b> , press [Y] and [↓]. <b>Calculate USER COLOR data automatically . OK ? &gt;</b> , press [Y] and [↓]. <b>Calculate ABL data automatically . OK ? &gt;</b> , press [Y] and [↓]. <b>finished . ( Hit return key ),</b> Press [↓], to menu of M26.	
	1.0V ADJUST 8) Special ADJUST		M26			
			M27			
			M28			
			M29			
			M30			
			M31		Set Input Video Level 1.0V using the OSD of the monitor. Select the <u>1: ADJUST VIDEO 1.0Vpp</u> from the menu.	
			M32		Change to the pattern and signal level at left.	
			M33		Make the adjustment to the value shown at right by using [←] and [→].	
			M34		Press [↓] to return to menu of M32.	Y=110 cd/m <sup>2</sup>
			M35		Press [E] [↓], to return to the main menu.	
N	DATA SAVING 7) Save data to file		N1		Set the cell to the menu at left and press [↓]. Key in the file name after [ ] :  Use serial number as a file name ( EXAMPLE : FF6110001 = "F6110001.DAT" )	

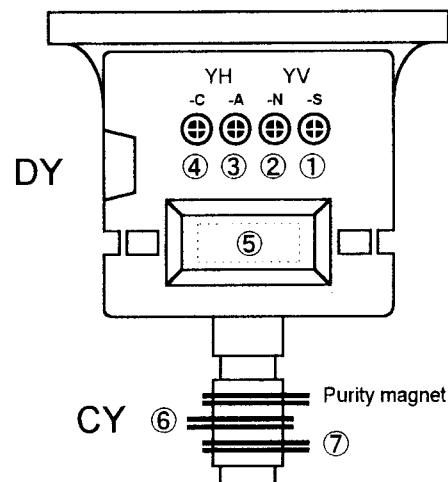
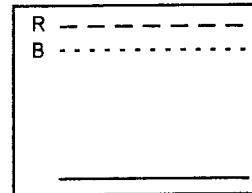


## 2. Adjustment Location for Purity and Convergence

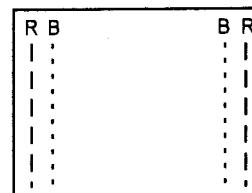
① Differential VR YV-S



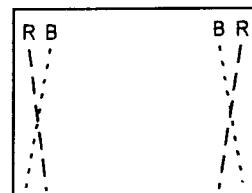
② Differential VR YV-N



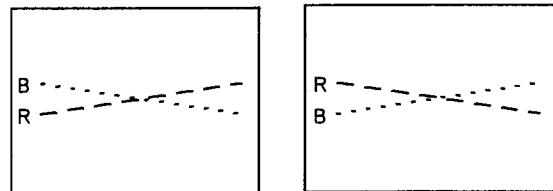
③ Differential VR YH-A



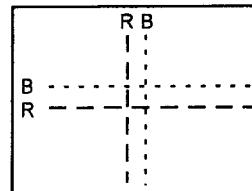
④ Differential VR YH-C



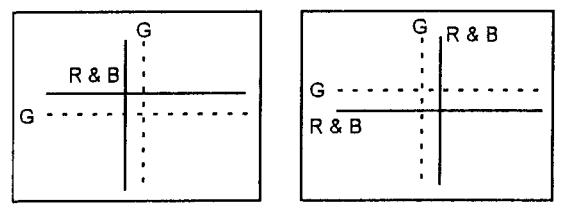
⑤ Differential Coil



⑥ Four-pole magnet



⑦ Six-pole magnet



## TECHNICAL INFORMATION FOR DDC

● It must be noted that this monitor is designed to be applicable to DDC1 communication the following points are different from ordinary monitors.

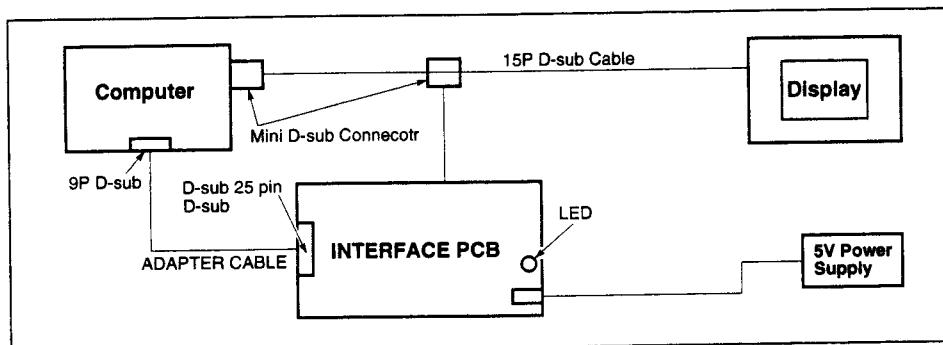
1. Use the signal cable, the which is furnished as an accessory (applicable to DDC1) only.
2. When replacing a PCB on which ROM for DDC1 is mounted, data writing is required.  
In addition to the above, a computer applicable to WINDOWS and a 5V power supply unit are required.

### ● DDC1 Data Read/write System

1. Communication jig

- (1) The composition of Communication jig  
① Interface PCB.    ② Adapter cable (D-SUB 25P → 9P)    ③ 15P D-SUB cable

- (2) Connection diagram for communication jig.



- (3) Procedure to turn on the power:

- ① Make connections as shown above.
- ② Turn on the computer.
- ③ Turn on the power supply of communication jig.
- ④ Turn on the power supply of the MONITOR.

(Note) If the above-mentioned operation is normal, LED of the communication jig turns green after step (4).

If this LED is red, repeat the steps (3) and (4).

- (4) Confirmation of DDC mode

LED is mounted on the communication jig. According to its color, the DDC mode can be discriminated.

- When LED is green.      DDC1 mode.
- When LED is orange.      DDC2B mode.
- When LED is red.          Transmission error.
- When LED is not lit.      Obsolete.

### 2. Preliminary arrangements for using DDC data read/write software

- (1) Copy DDC WRITE. EXE from floppy disk to hard disk drive (Name: \PanaTool Directory).

- (2) Register DDC data read/write software (DDCWRITE.EXE) in the Icon.

- ① Click the menu bar “Icon” of the program manager.
- ② Select “register and group create” from the pull down menu.
- ③ Select “group create.”
- ④ Name the group PanaTool and register the group.
- ⑤ Repeat (1) and (2) again and select “Icon registration.”
- ⑥ Enter “DDC1/2B” for [Title] and “Hard disk drive name: \PanaTool\DDCWRITE. EXE” for [Command line]. Then select [OK]

### 3. How to use DDC data read/write software.

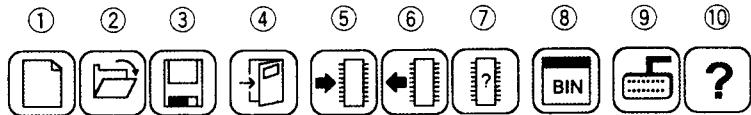
- (1) Start of DDC data read/write software.

Double-click the “DDC1/2B” Icon in the PanaTool group.

- (2) Meaning of a button displayed.

The tool bar indicates the nine icons shown below.

These icons are explained, from left to right :



- Icon ① : Initialization of screen display contents.
- Icon ② : File is opened and displayed on the screen.
- Icon ③ : Data are stored in a file.
- Icon ④ : Finish the DDC data read/write software.
- Icon ⑤ : Data displayed on the screen are written in EEPROM.
- Icon ⑥ : Contents of EEPROM are displayed on the screen.
- Icon ⑦ : Contents of EEPROM are compared with the data displayed on the screen.
- Icon ⑧ : Check binary data by text format.
- Icon ⑨ : Communication port setting.  
Contents of setting : PORT → Using Communication port No.  
Baud rate → 9600, Data → 8 bits, Parity → Nil, Stop → 1 bits
- Icon ⑩ : Version information display.

- (3) Using the tool bar explained in (2) above, write data in EEPROM and make operations of reading, etc. A pop-up window may be displayed on the way. In such a case, select a proper one according to the message.

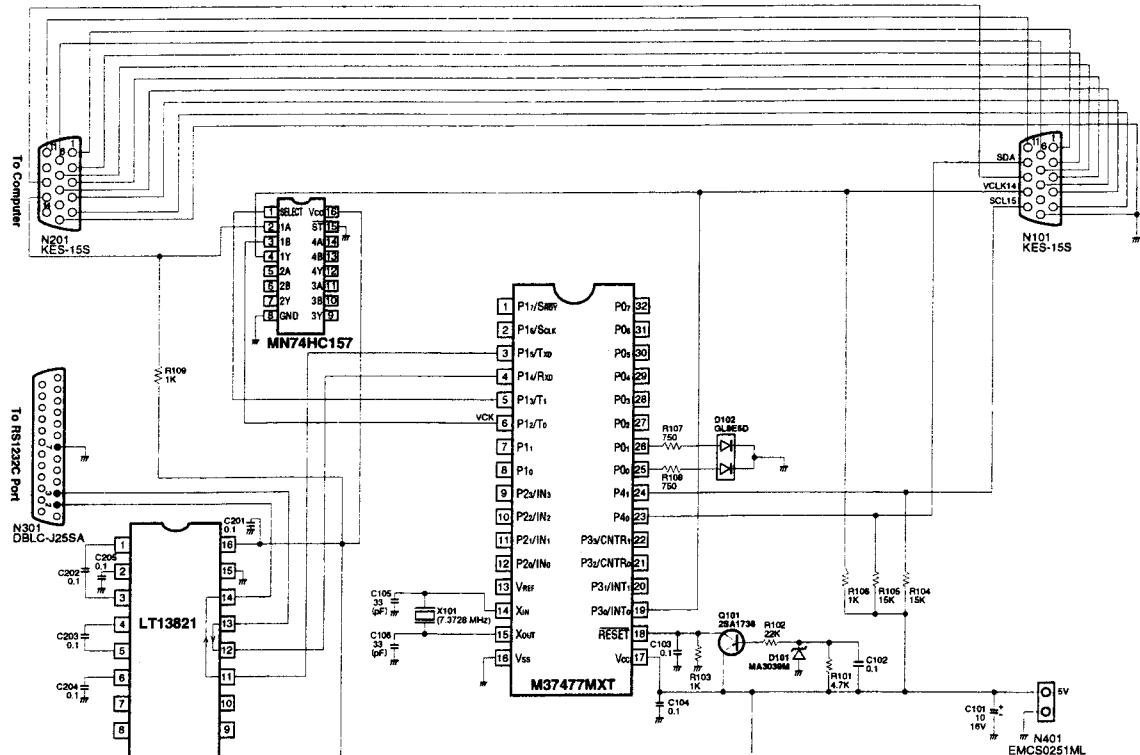
**(Example 1) EEPROM data are displayed on the screen.**

- ① Click the icon (6th from the left) in the tool bar, with the arrow pointing from the memory chip.
- ② Decided whether reading is started in DDC1 mode or DDC2B mode.
- ③ Select START.

**(Example 2) Data displayed on the screen are written in EEPROM.**

- ① Click the icon (5th from the left) in the tool bar, with the arrow pointing toward in the memory chip.
- ② Select START.

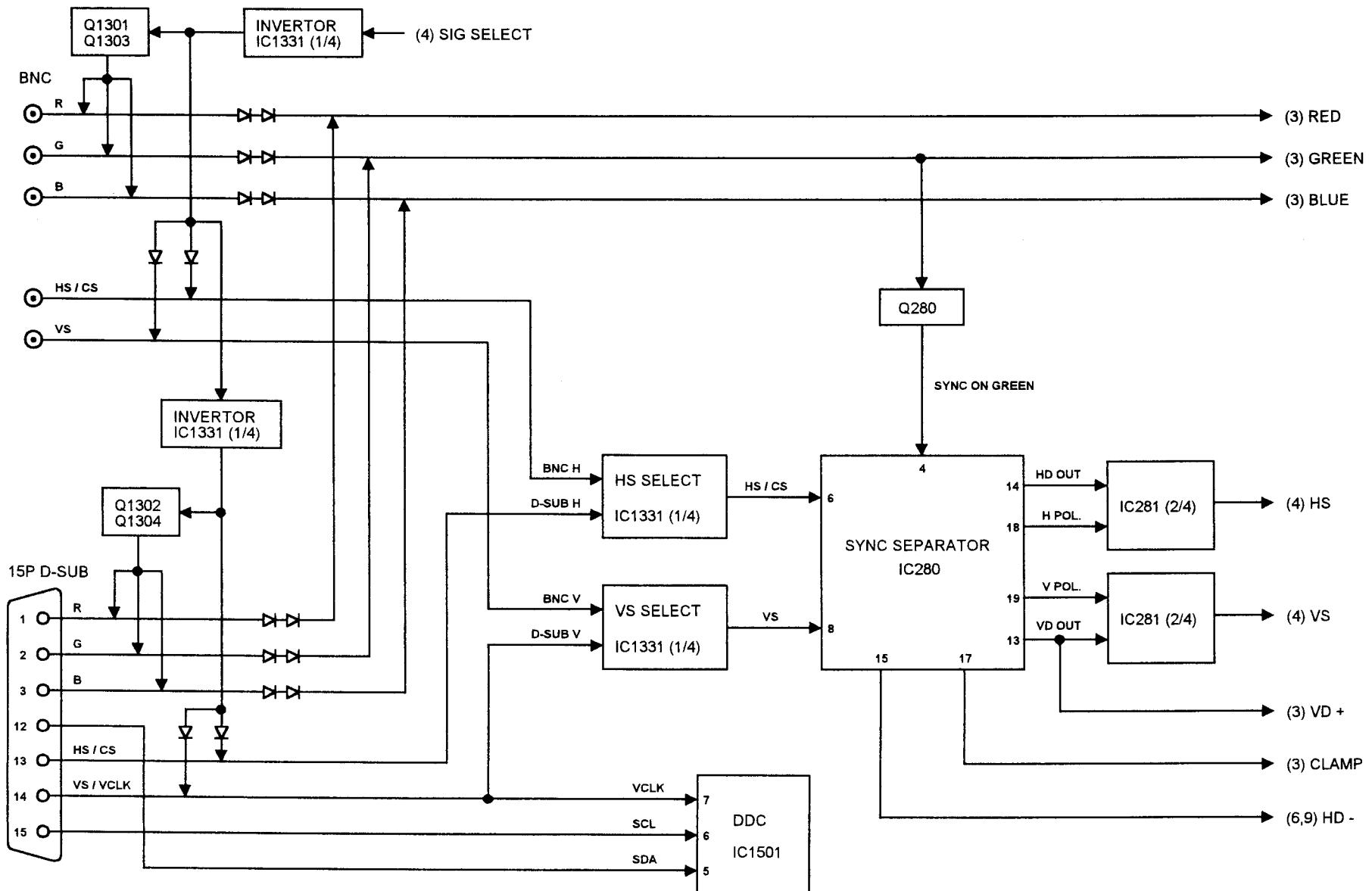
## SCHEMATIC DIAGRAM FOR INTERFACE



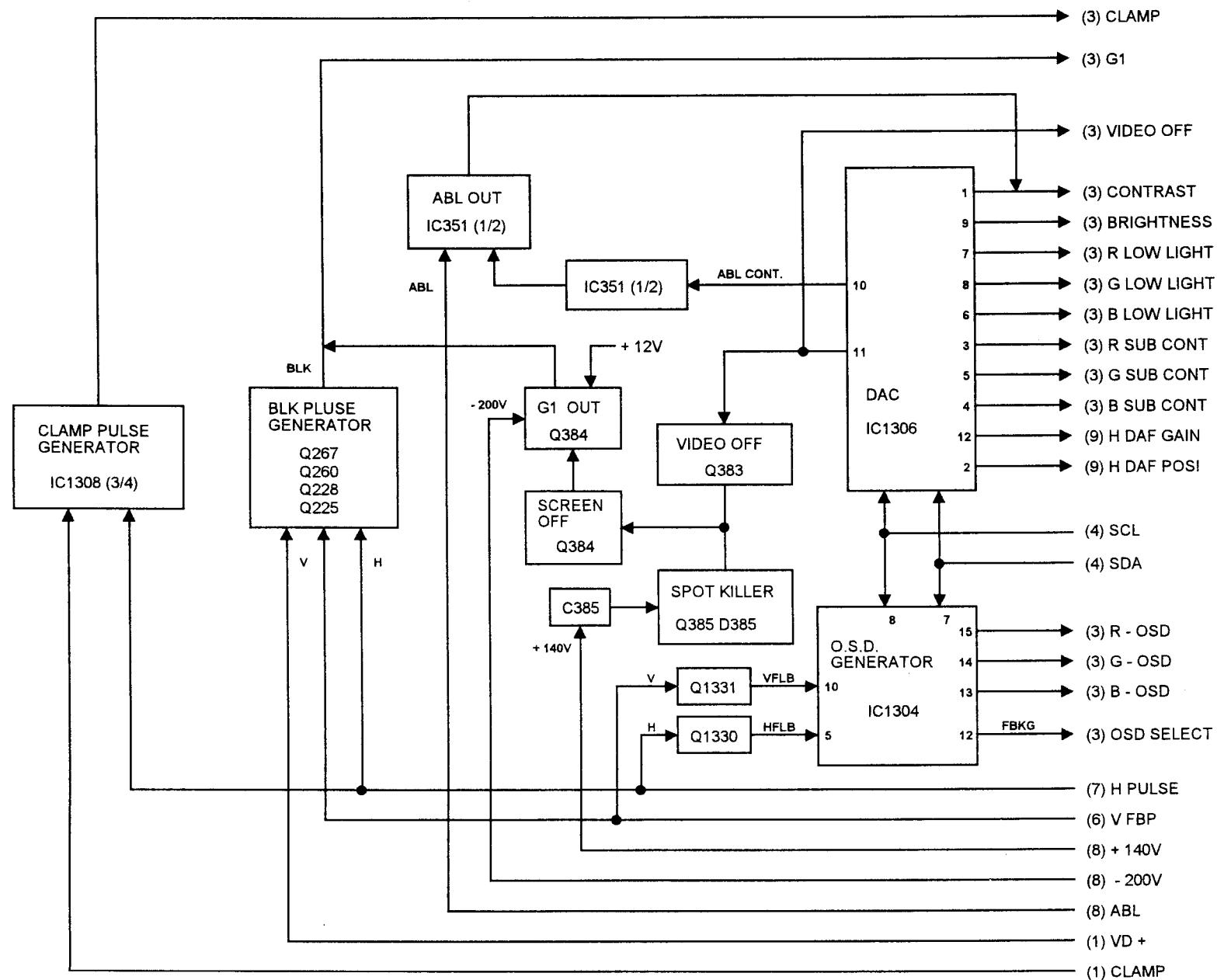
# SHEET (1) SIGNAL SELECT / SYNC SEPARATE

## BLOCK DIAGRAM

- 35 -

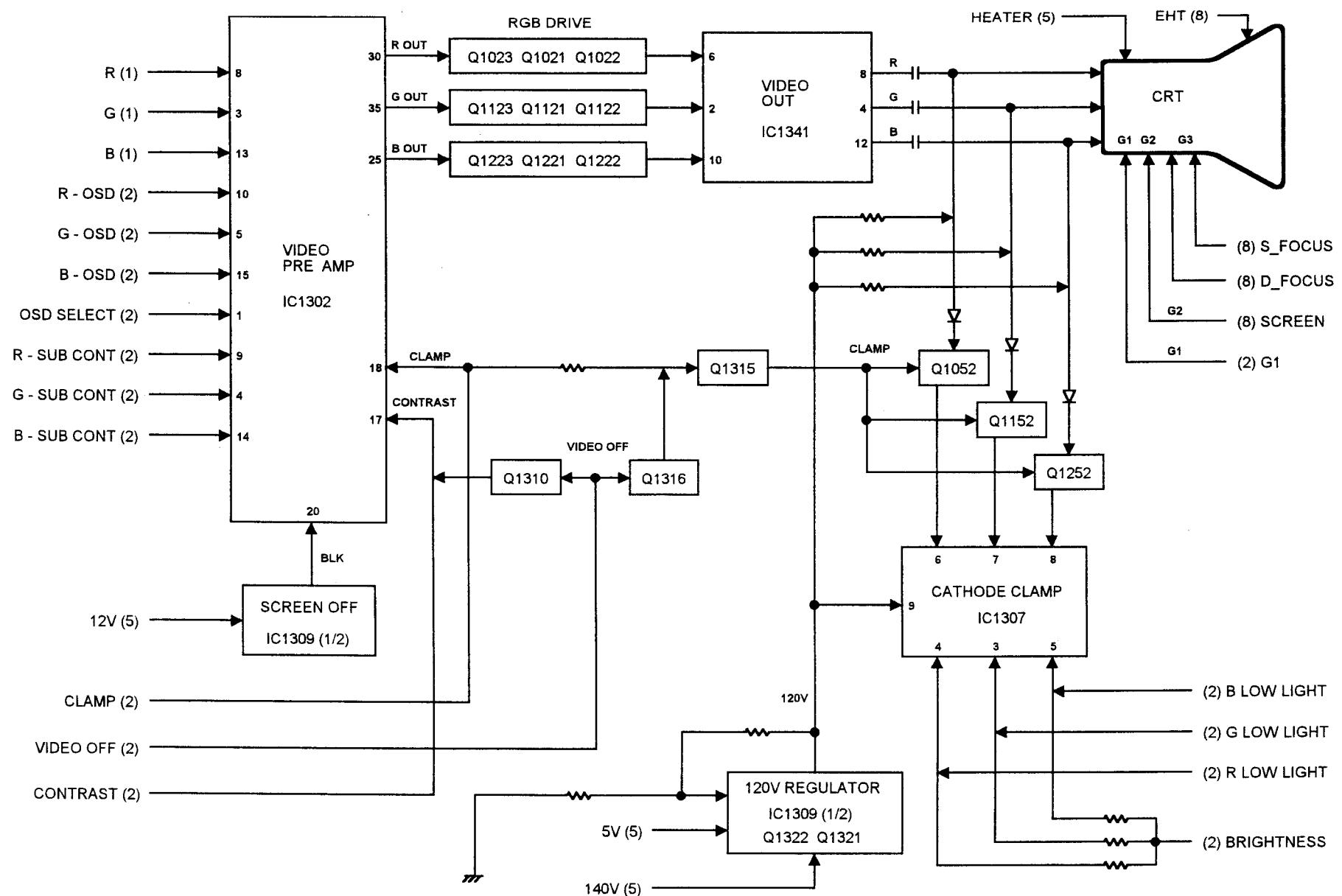


## SHEET (2) O.S.D. GENERATOR / DAC FOR VIDEO / BLK

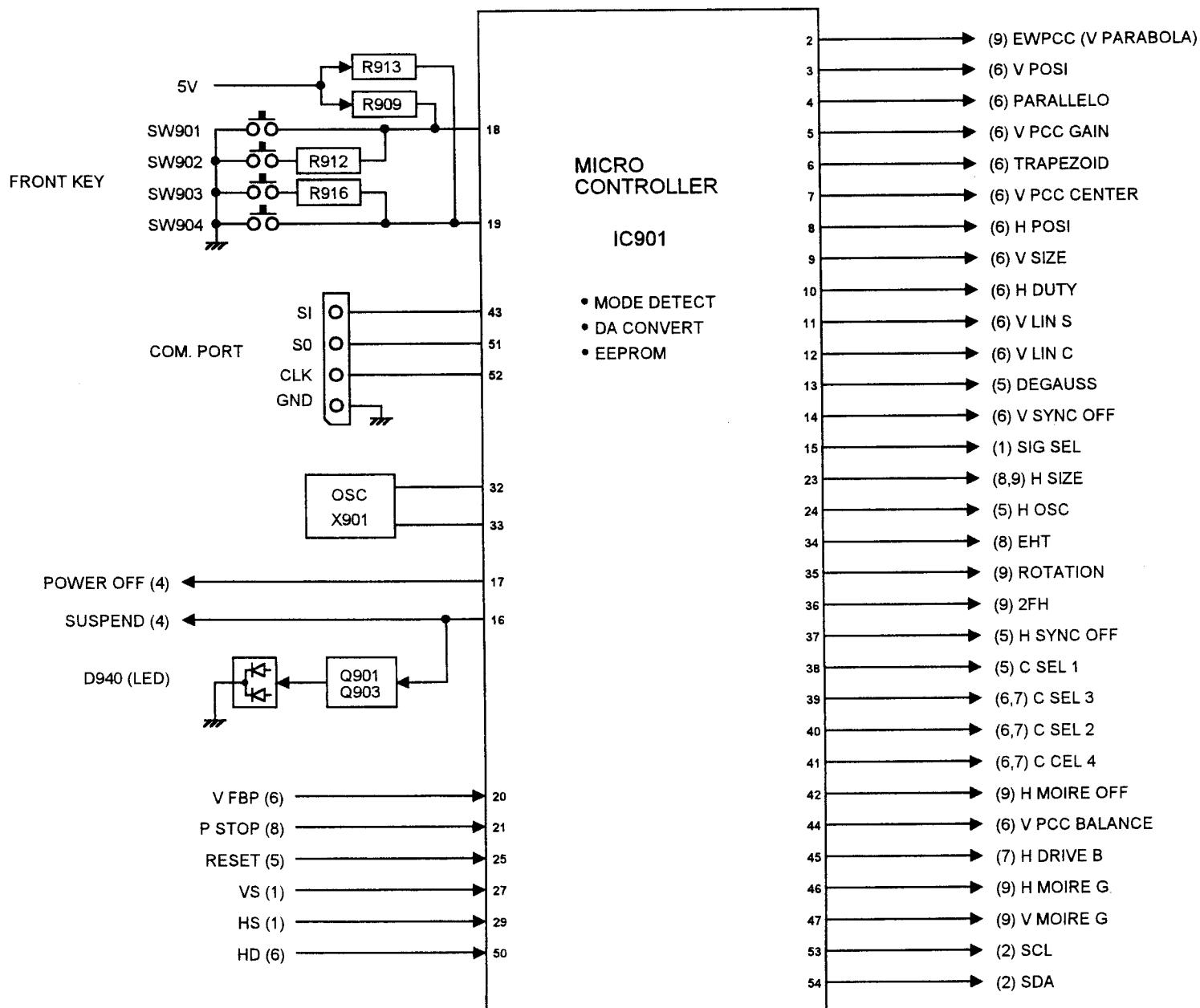


### SHEET (3) VIDEO OUT PUT

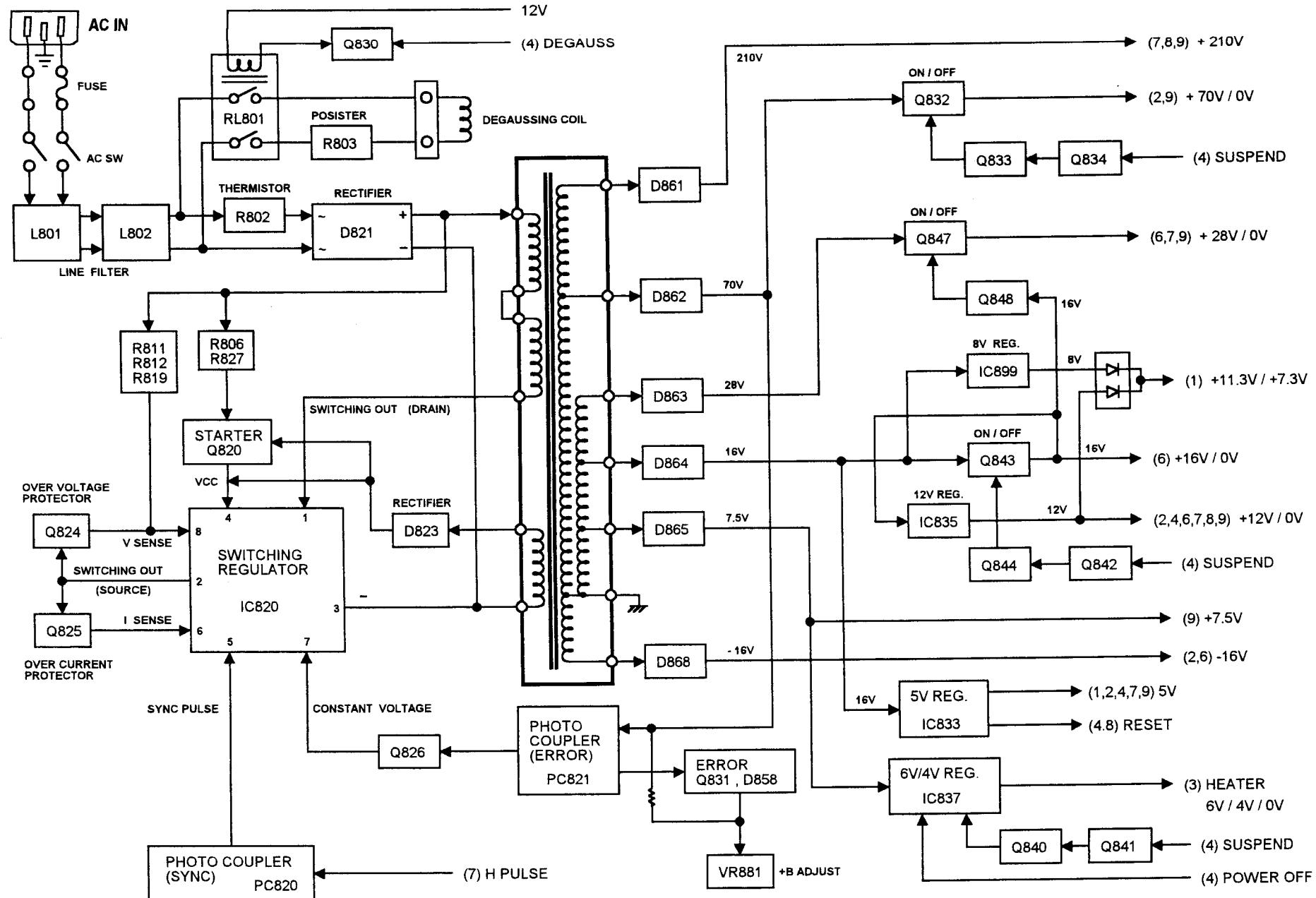
- 37 -



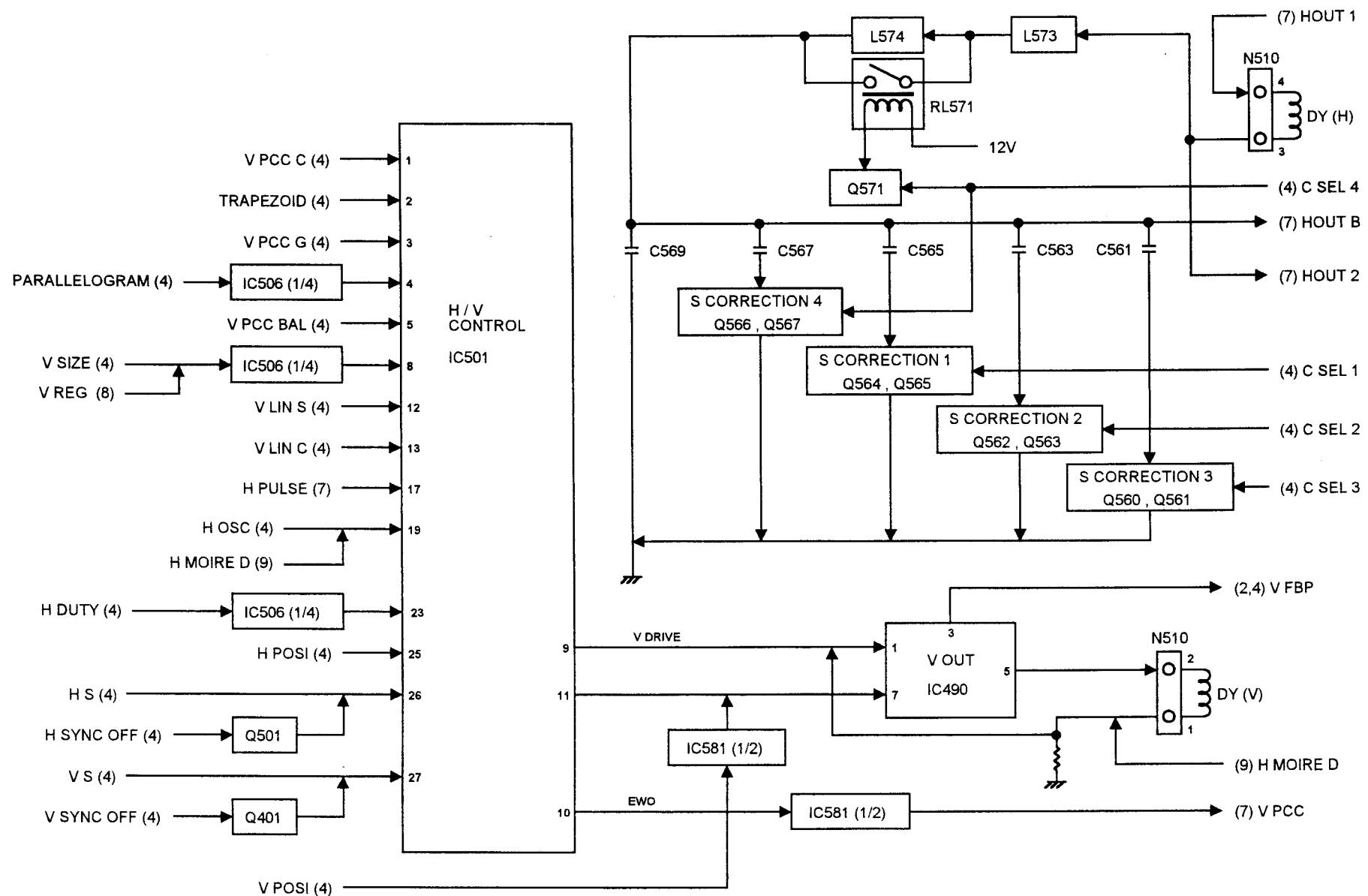
## SHEET (4) MICRO CONTROLLER



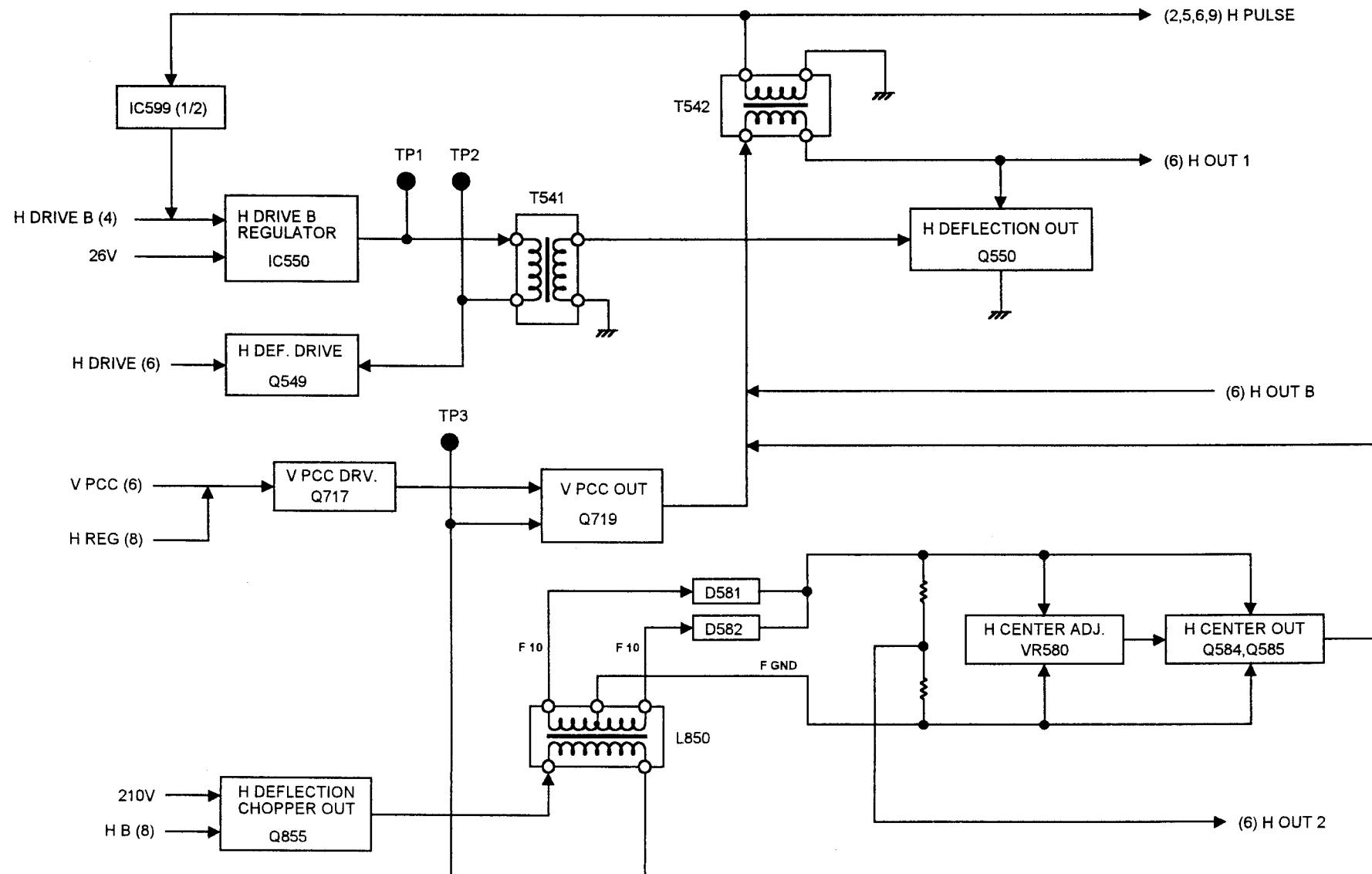
# SHEET (5) POWER SUPPLY



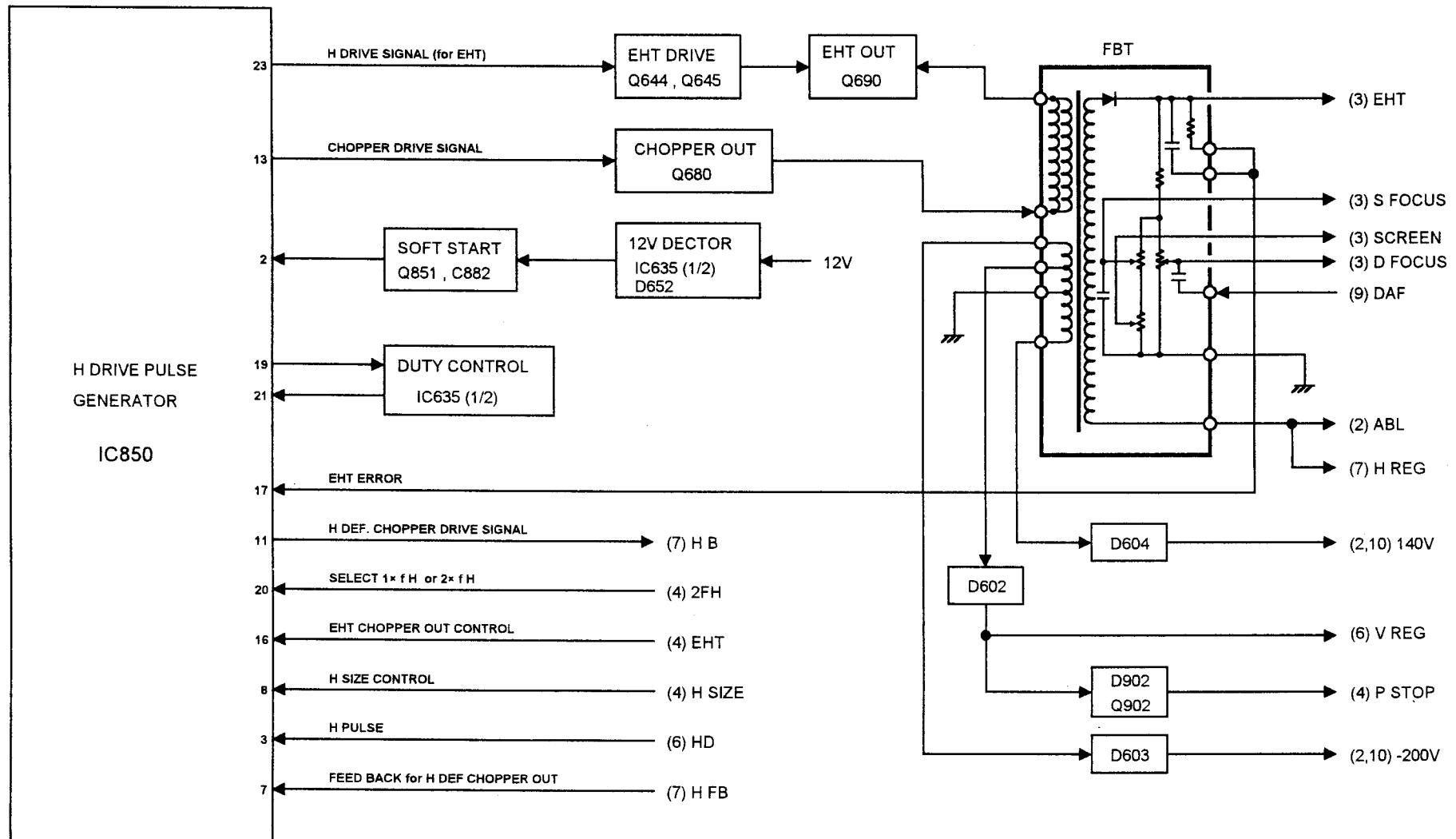
## SHEET (6) H. V. CONTROL / H LIN / V. OUT



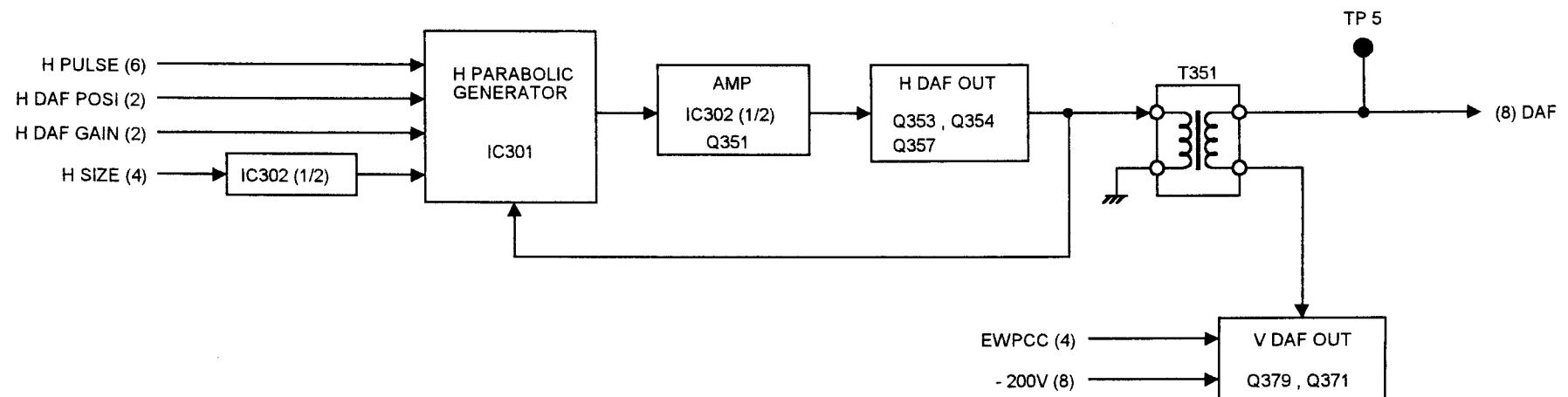
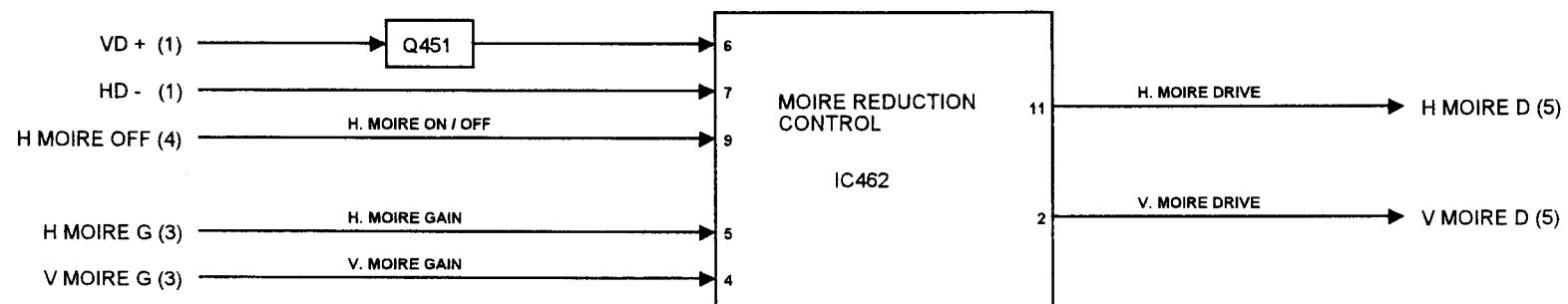
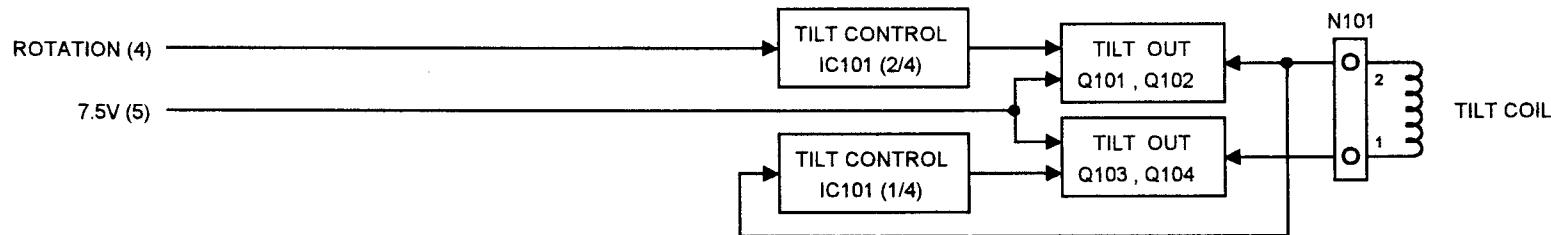
## SHEET (7) H DEFLECTION OUT



## SHEET (8) H DRIVE / EHT OUT



## SHEET (9) TILT / DAF / MOIRE REDUCTION

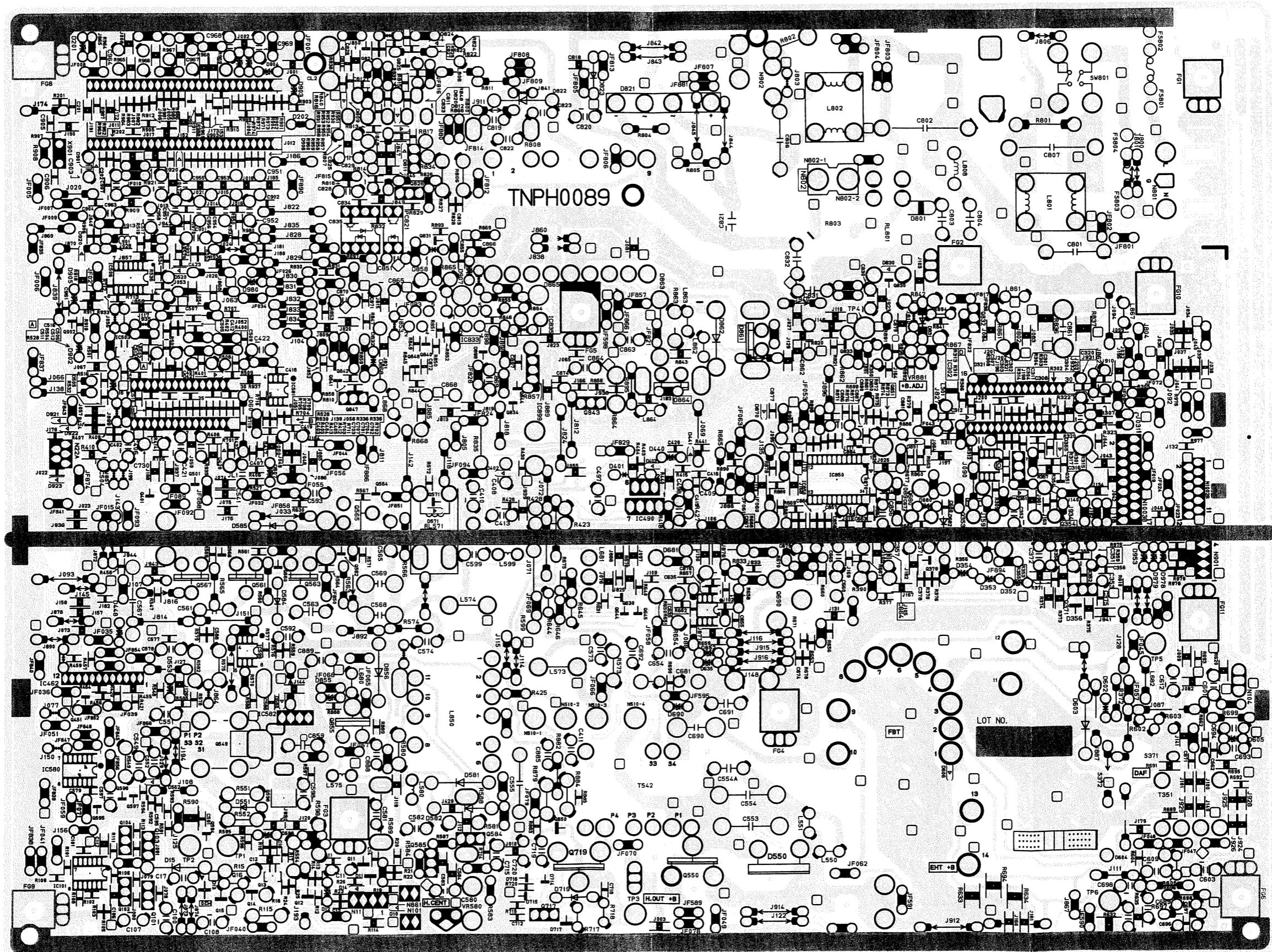


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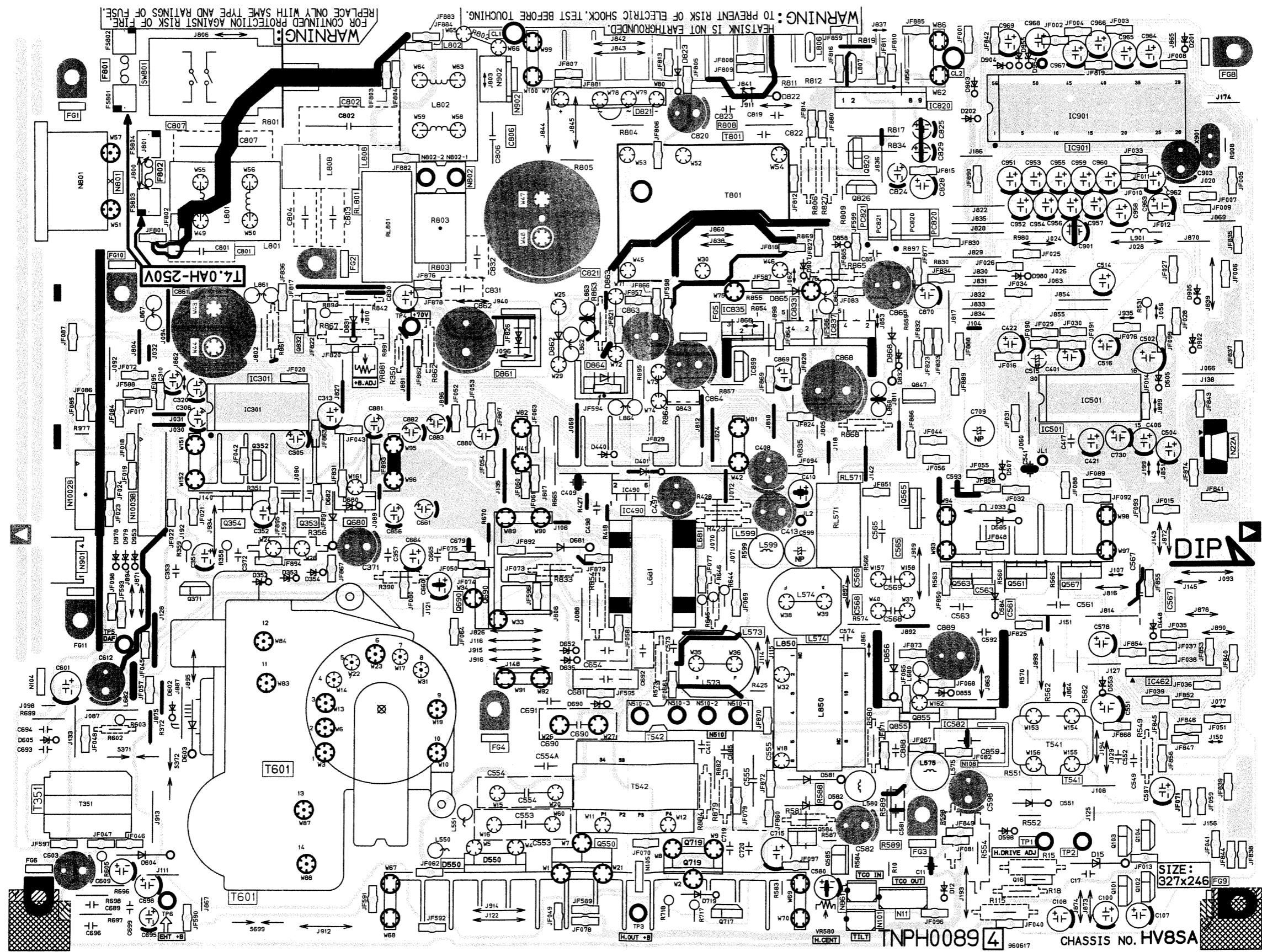
## CONDUCTOR VIEW

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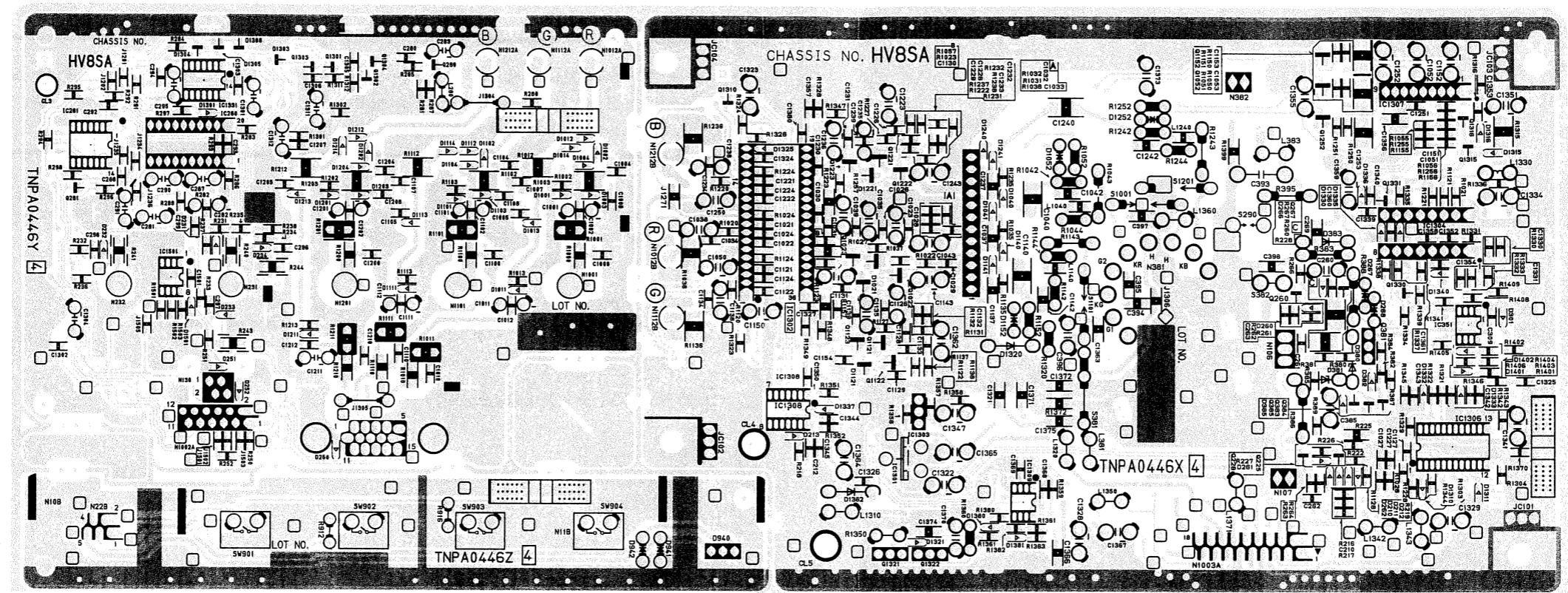
MAIN BOARD (Solder side)



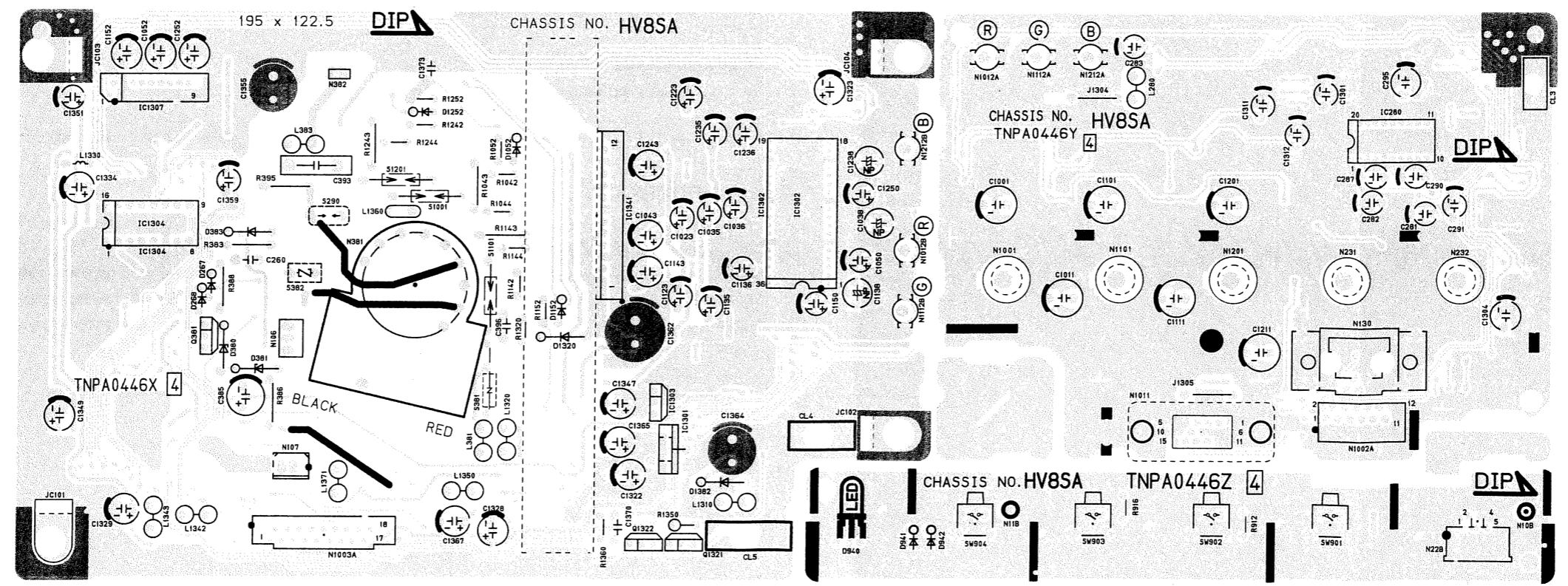
## MAIN BOARD (Parts side)



## **VIDEO BOARD (Solder side)**



## **VIDEO BOARD (Parts side)**



## SCHEMATIC DIAGRAM

### IMPORTANT SAFETY NOTICE

The component identified by shading or international symbol  $\Delta$  on the following schematic diagrams incorporate special features important for protection from X-Radiation, fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for those critical components.

#### NOTES :

##### 1. RESISTOR

All resistors are carbon 1/4W resistor, unless otherwise noted by the following marks.

Unit of resistance is ohm ( $\Omega$ ), (K = 1,000, M = 1,000,000)

$\bigcirc$	Non Flammable	$\Delta$	Solid
$\blacksquare$	Metal Oxide	$(\odot)$	Metal (Precision and high stability)
$\square$	Wire Wound	$\text{---}$	Thermistor
$\otimes$	Fusible	$\text{---}$	Positive coefficient Thermistor
$\blacksquare$	Flame Proof Rectangular		

##### 2. CAPACITOR

All capacitors are ceramic 50V capacitor, unless otherwise noted by the following marks.

Unit of capacitance is  $\mu F$ , unless otherwise noted.

$\text{---}$	Electrolytic	$(\text{M})$	Polyester
$(\text{T})$	Tantalum	$(\text{m})$	Metalized Polyester
$(\text{NP})$	Bipolar	$\blacksquare$	Polypropylene
$(\text{S})$	Polystyrene	$\triangle$	Mica
$\otimes$	Temperature Compensation	$\bigcirc$	Ceramic
		$(\odot)$	Ceramic (SL)

##### 3. COIL

Unit of inductance is  $\mu H$ , unless otherwise noted.

##### 4. VOLTAGE MEASUREMENT

Voltage is measured by a digital meter receiving normal signal.

5. This schematic diagram is the latest at the time of printing and is subject to change without notice.

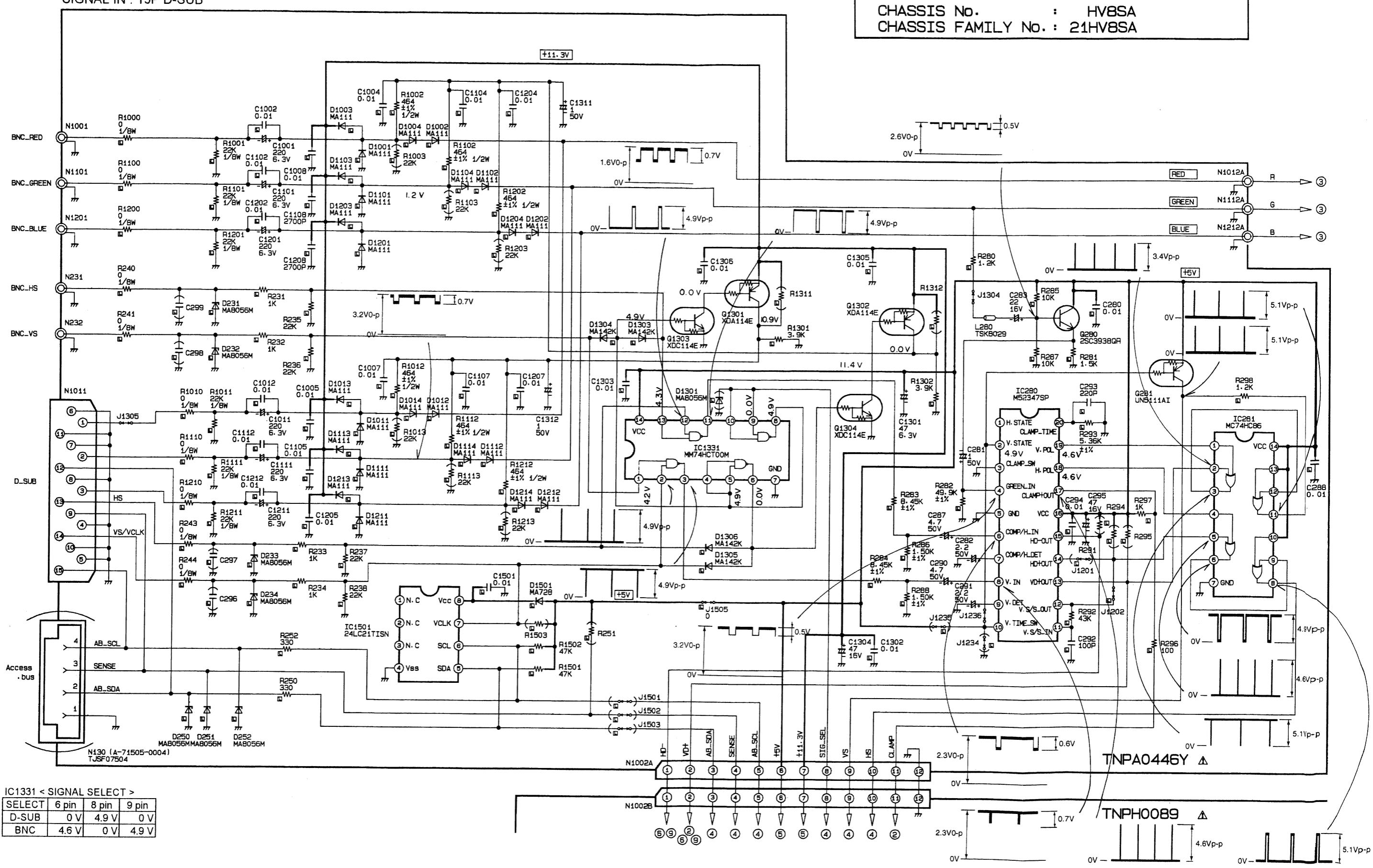
#### SERVICE NOTES :

This model has a section that does not share a common ground with the power supply section. The different sections are referred to as the HOT section and the COLD section in the precautions below.

1. Do not touch the HOT section and the COLD section at the same time. You may receive an electric shock.
2. Do not short the HOT section to the COLD section. This could blow the fuse or damage parts.
3. Never measure the HOT section and the COLD section at the same time when using tools such as oscilloscopes or multimeters.
4. Always unplug the unit before beginning any operation such as removing the chassis.

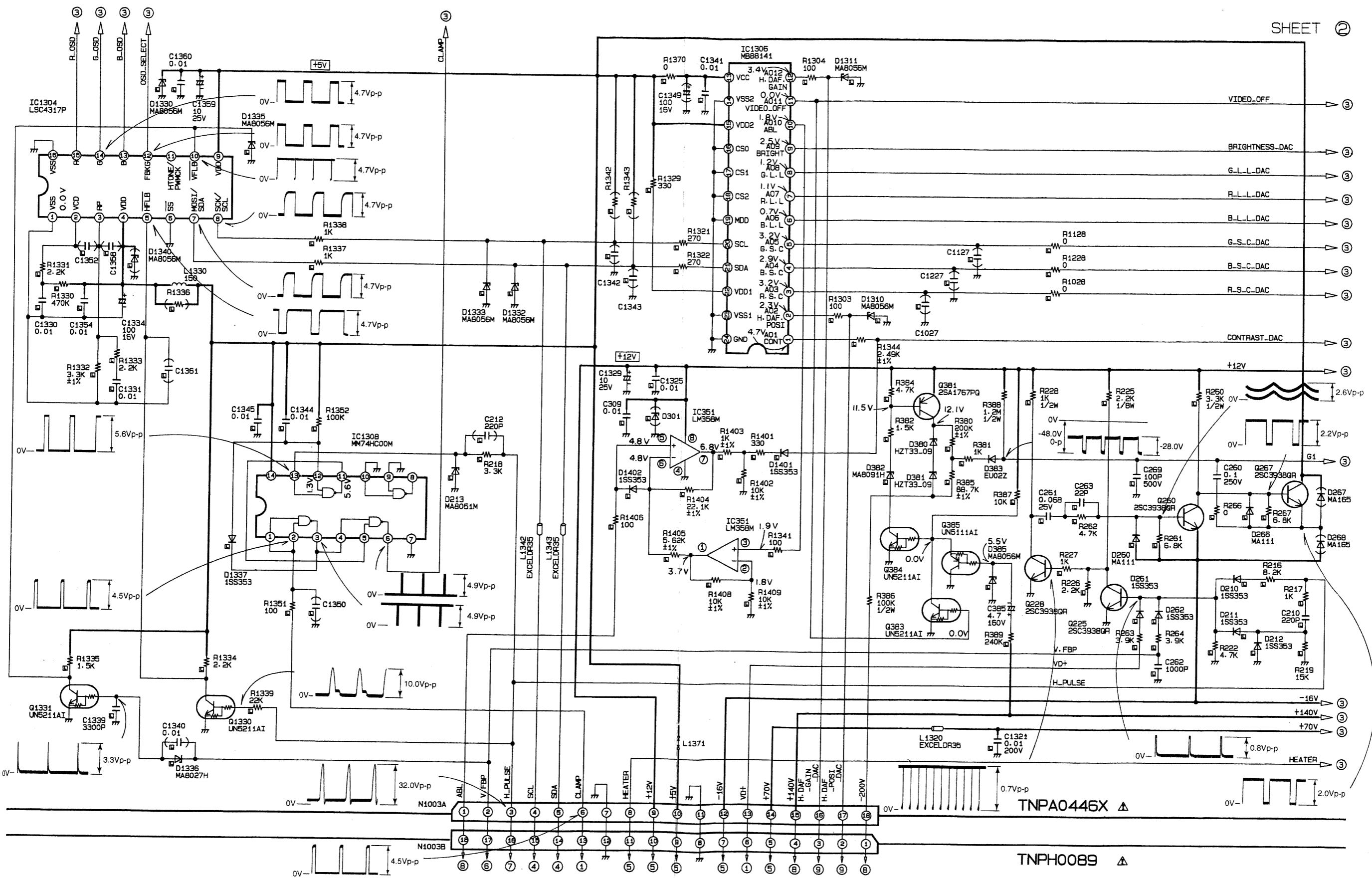
SCHEMATIC DIAGRAM FOR  
MODEL No. : TX-D2162

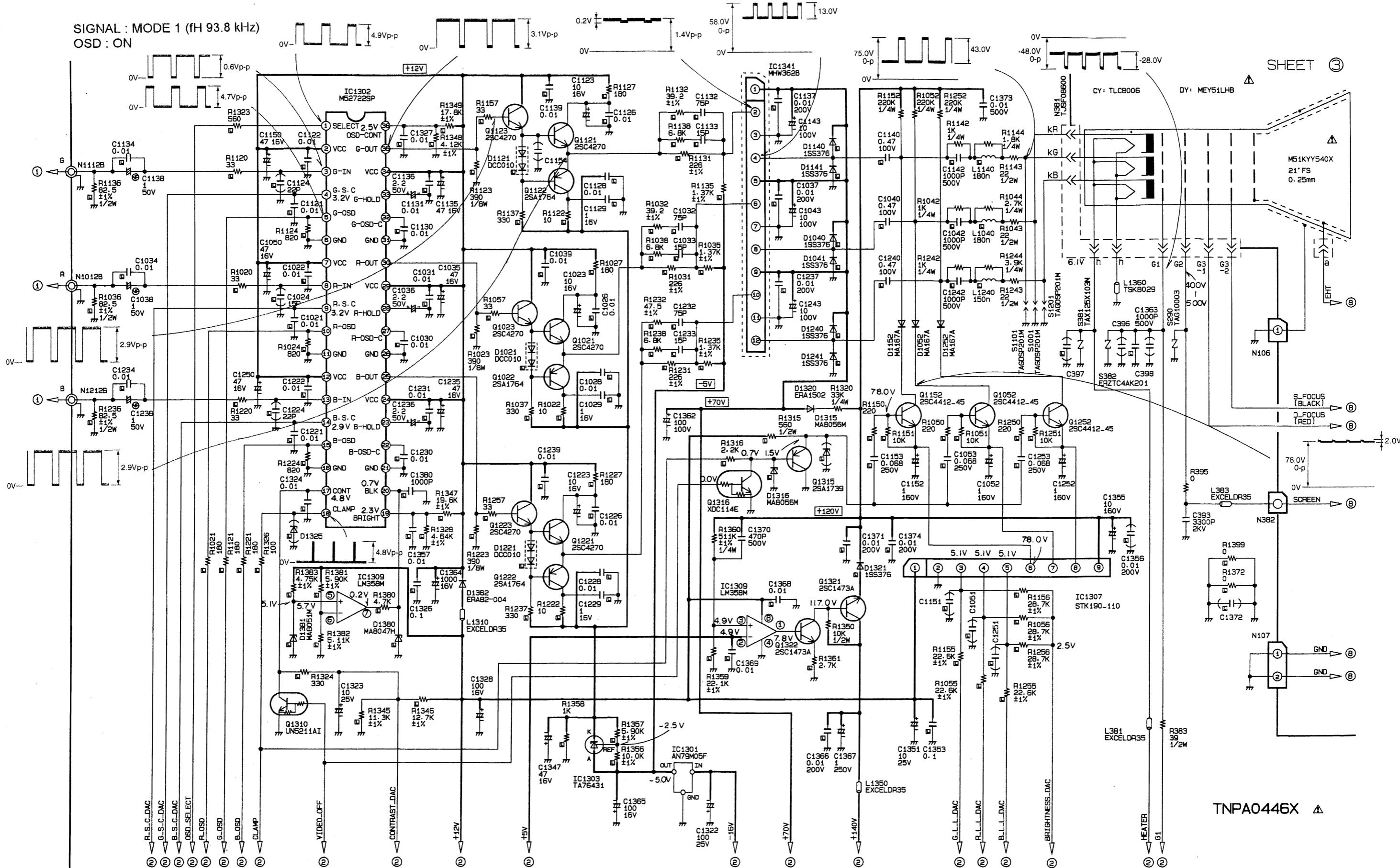
CHASSIS No. : HV8SA  
CHASSIS FAMILY No. : 21HV8SA



SIGNAL : MODE 1 (fH 93.8 kHz)  
OSD : ON

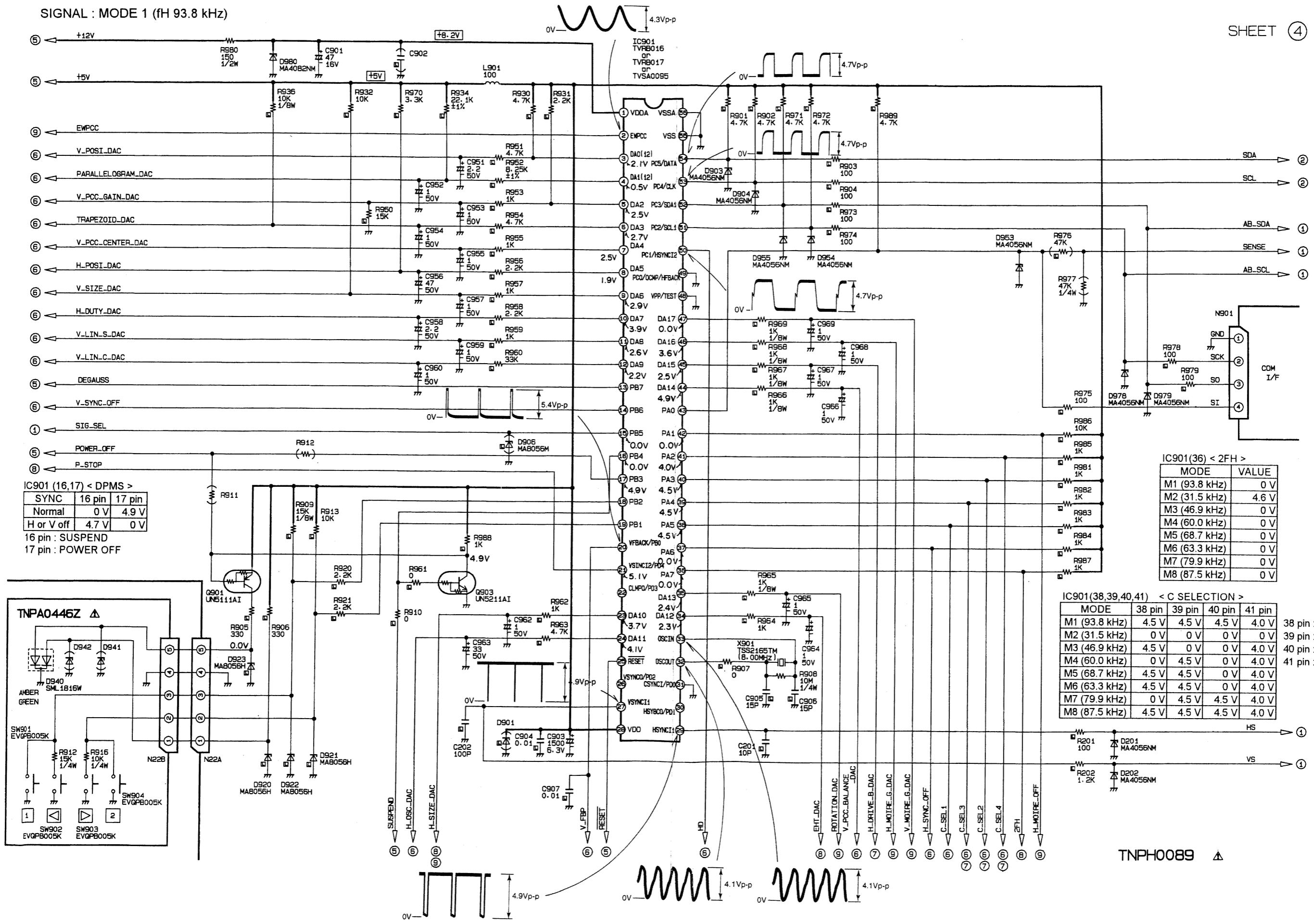
SHEET ②





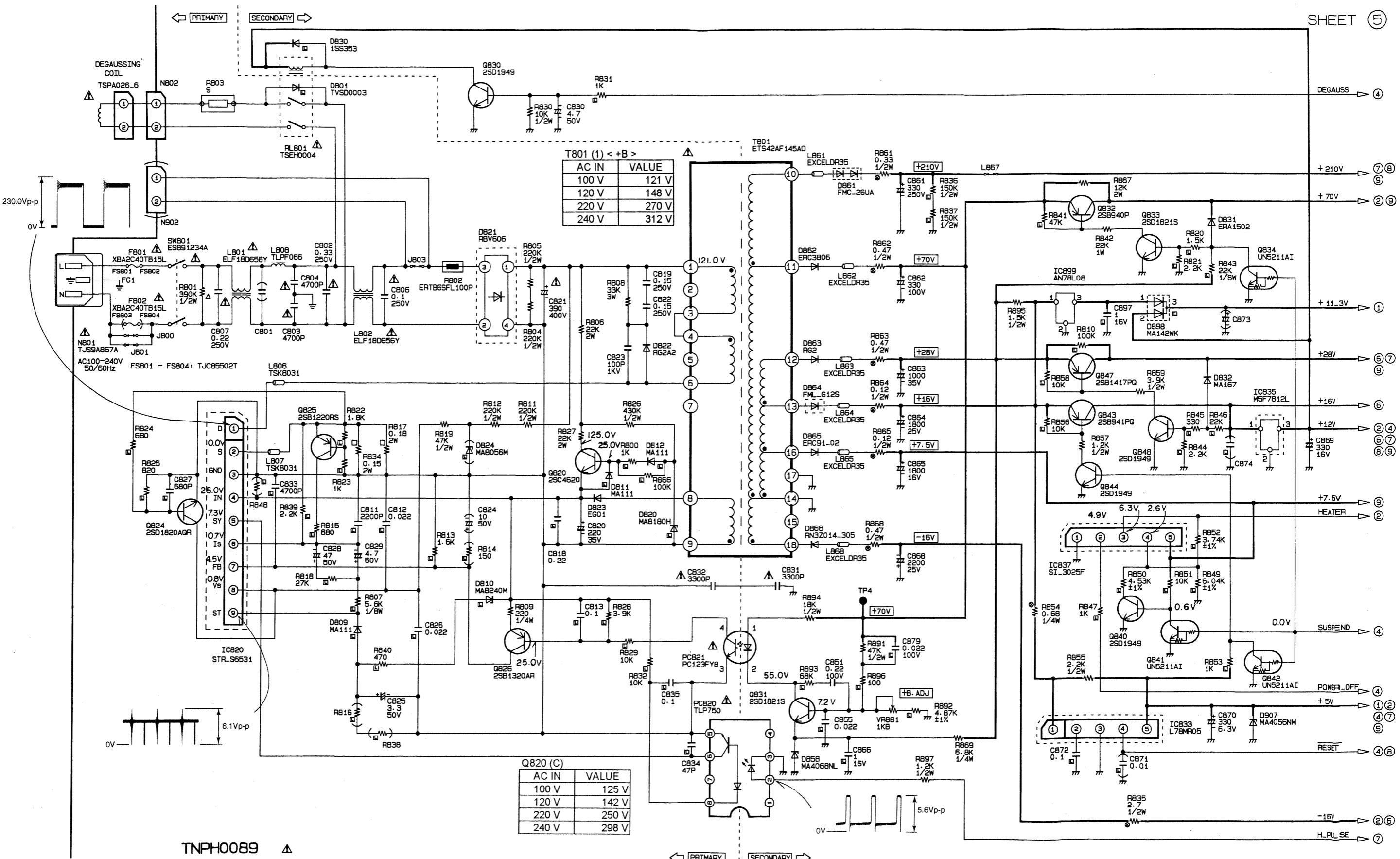
SIGNAL : MODE 1 (fH 93.8 kHz)

SHEET (4)



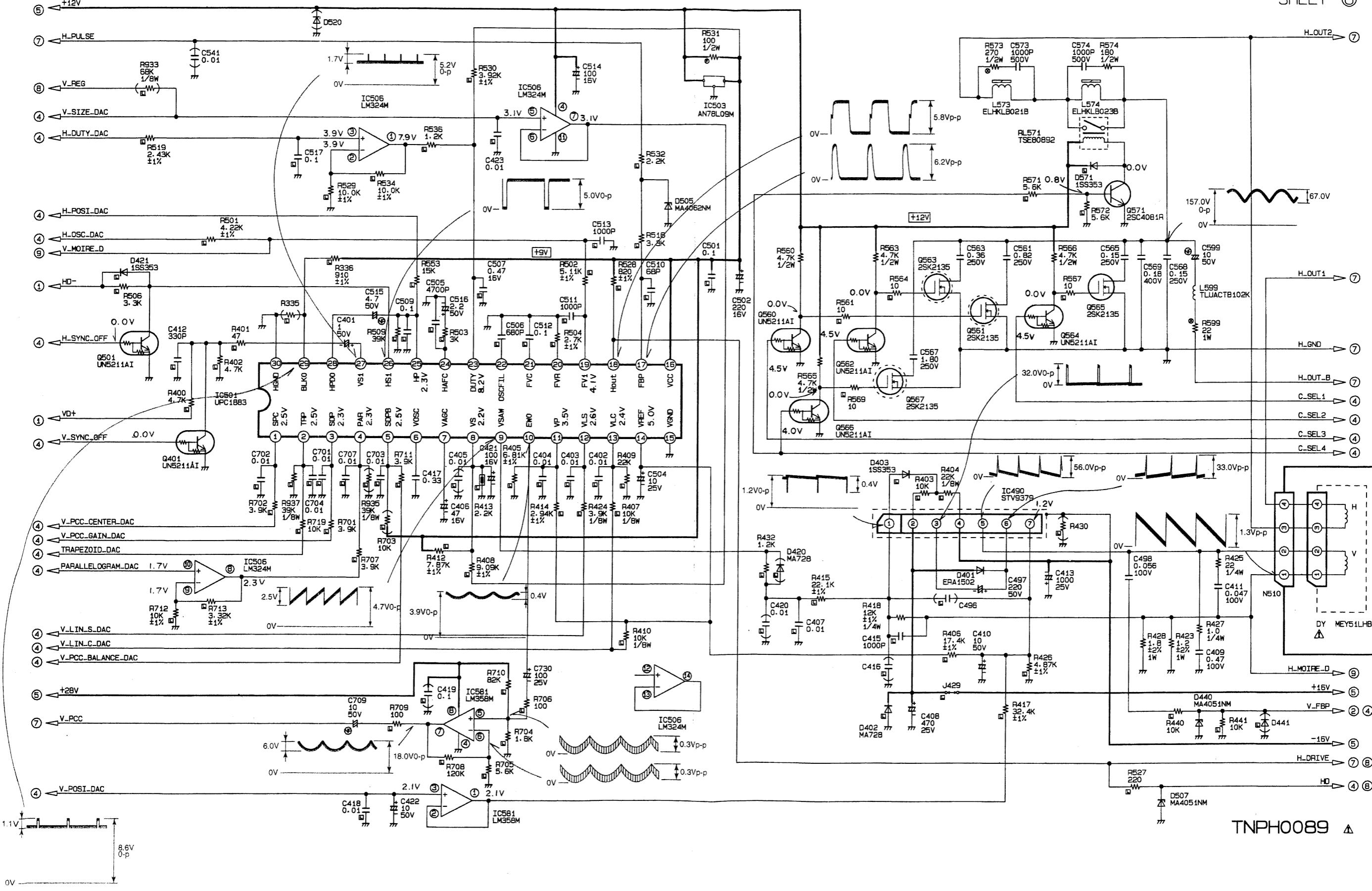
SIGNAL : MODE 1 (fH 93.8 kHz)  
AC IN : 100V

SHEET (5)



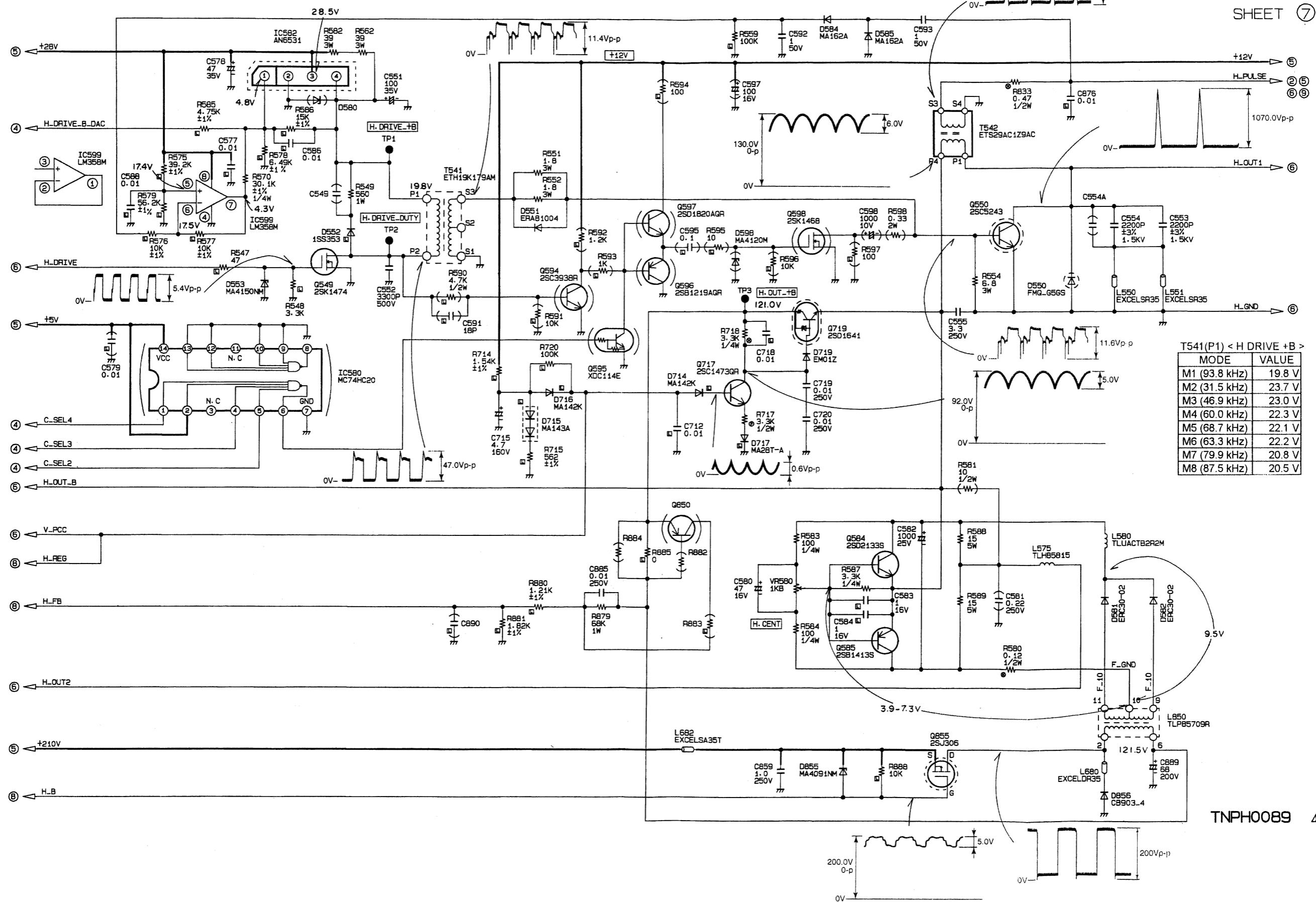
SIGNAL : MODE 1 (fH 93.8 kHz)

SHEET ⑥



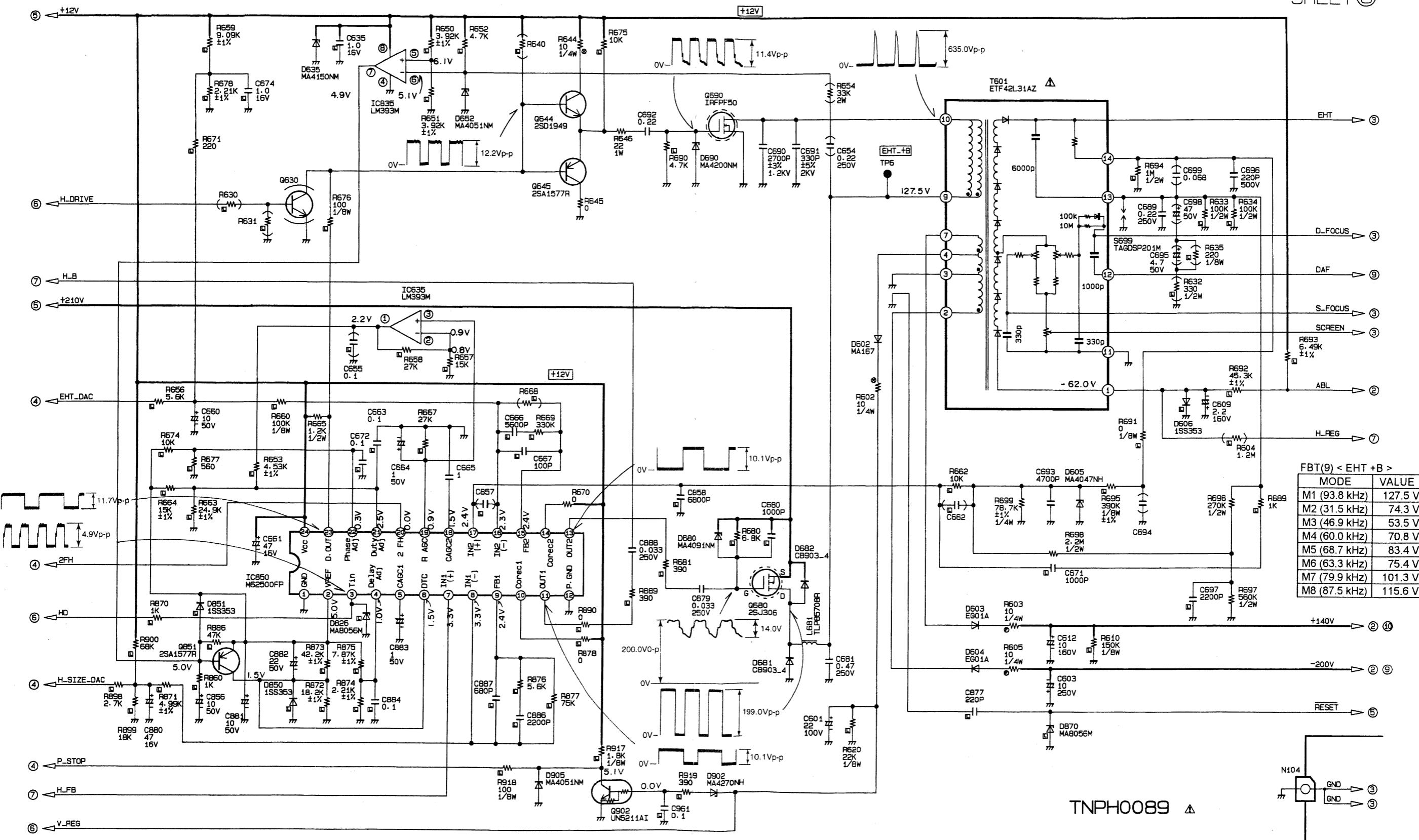
SIGNAL : MODE 1 (fH 93.8 kHz)

SHEET 7



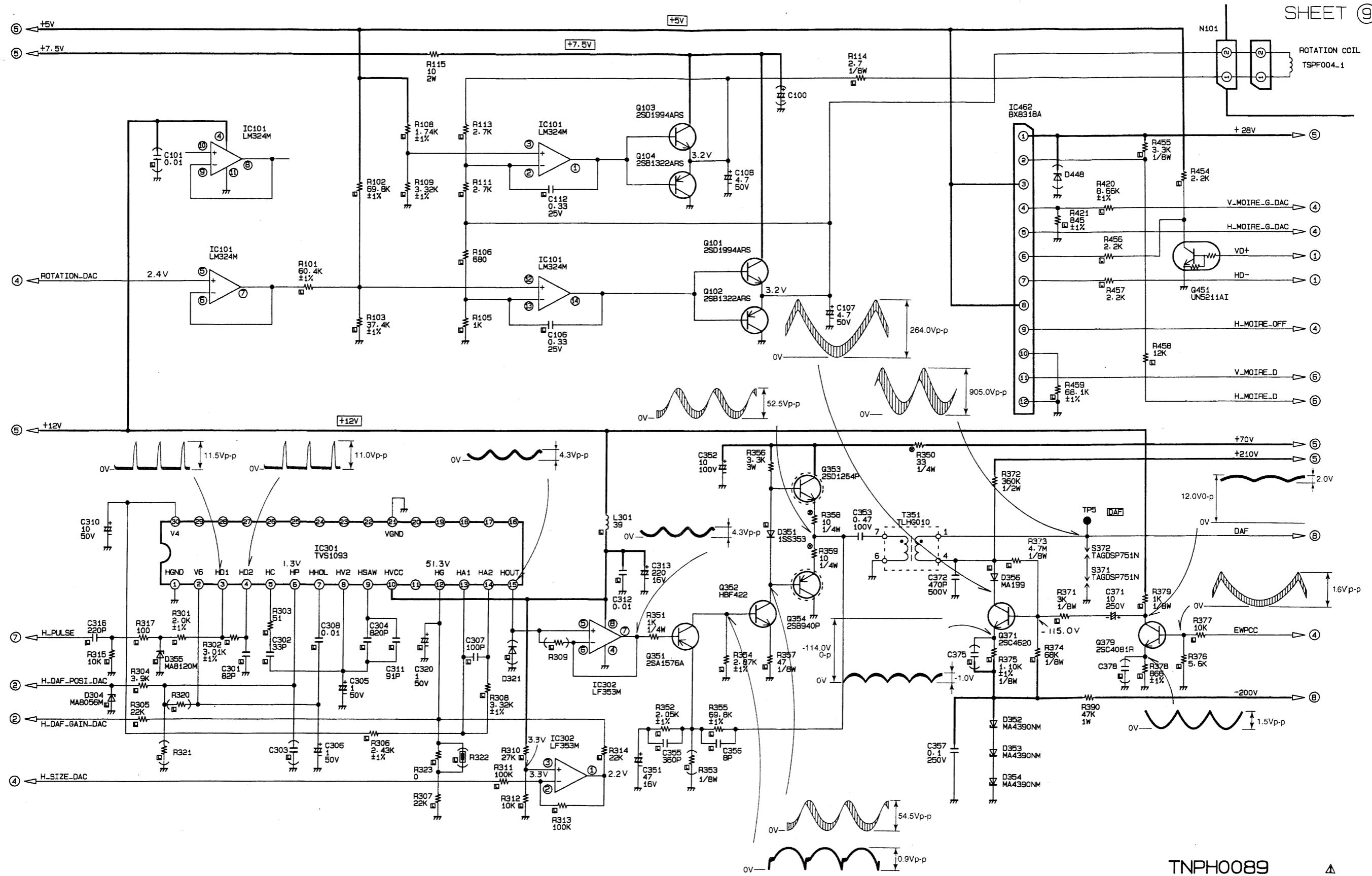
SIGNAL : MODE 1 (fH 93.8 kHz)

SHEET 8

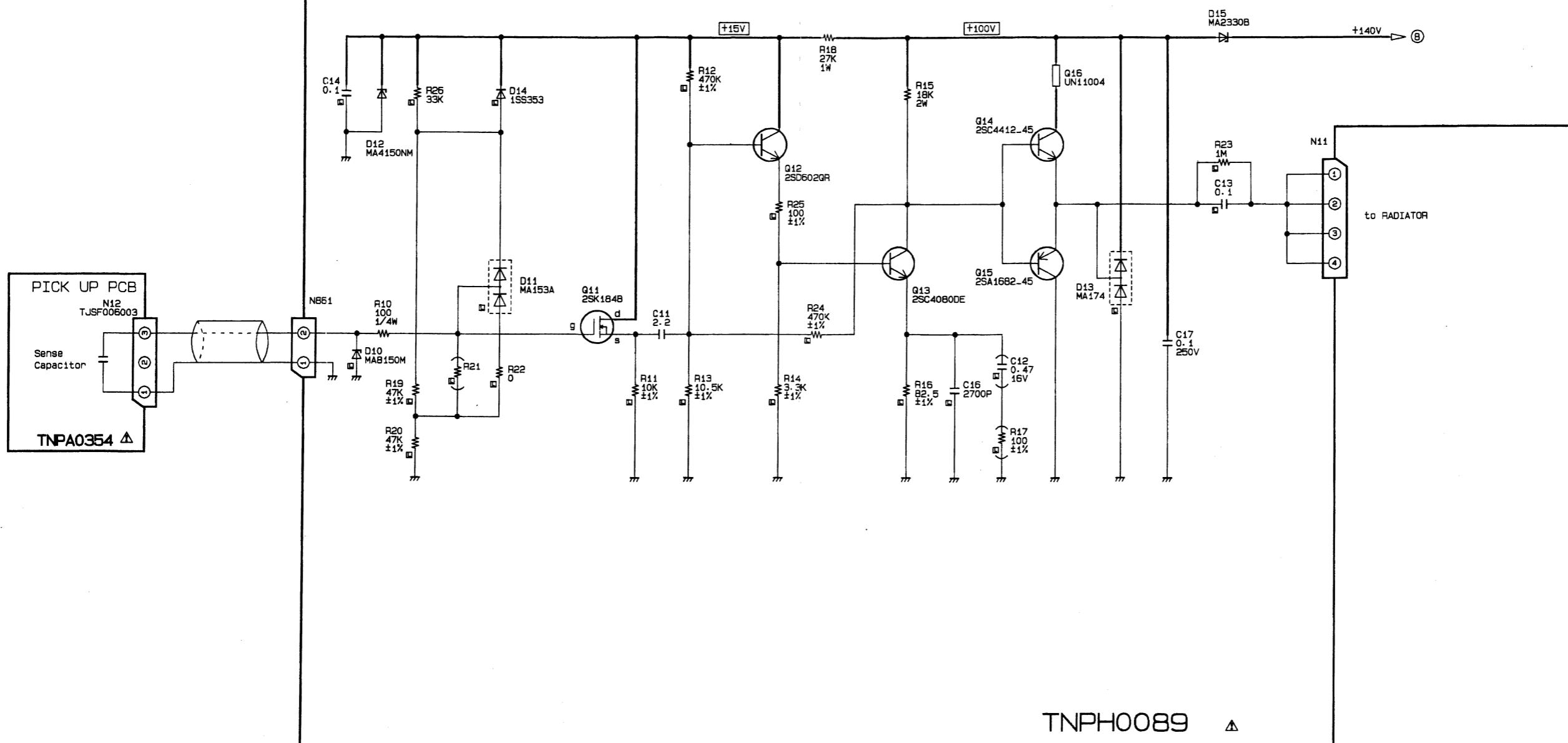


SIGNAL : MODE 1 (fH 93.8 kHz)

SHEET ⑨

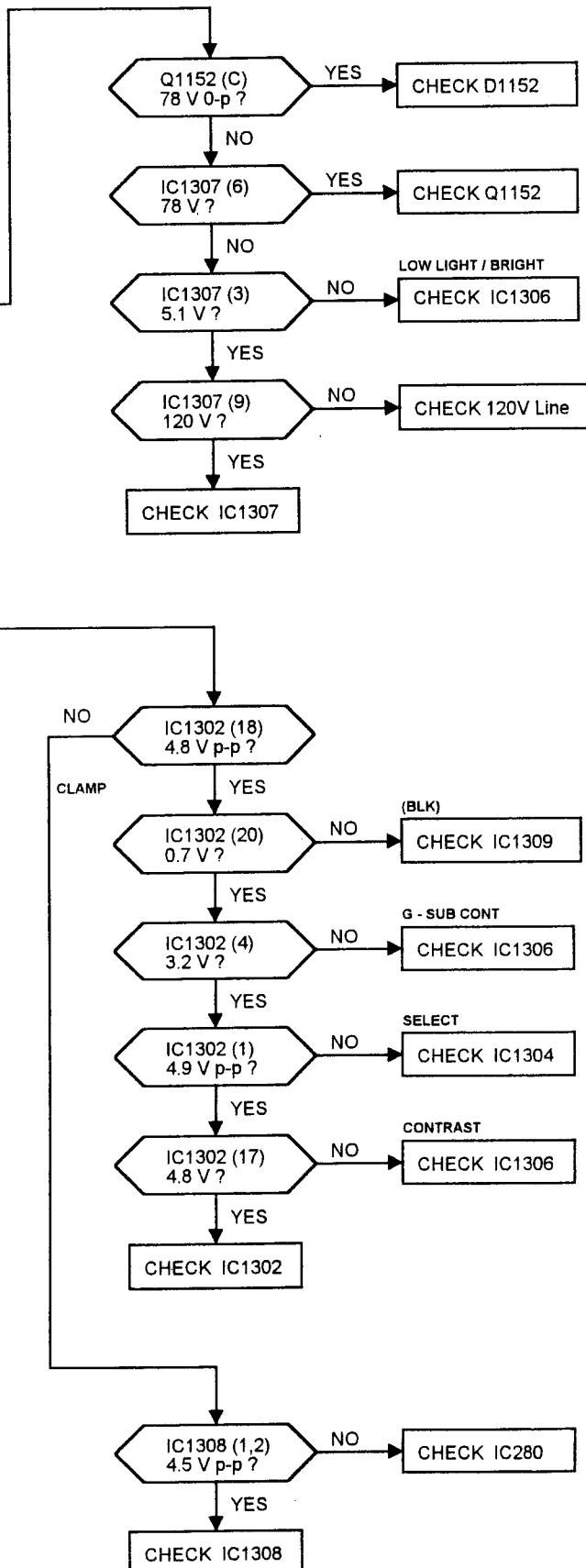
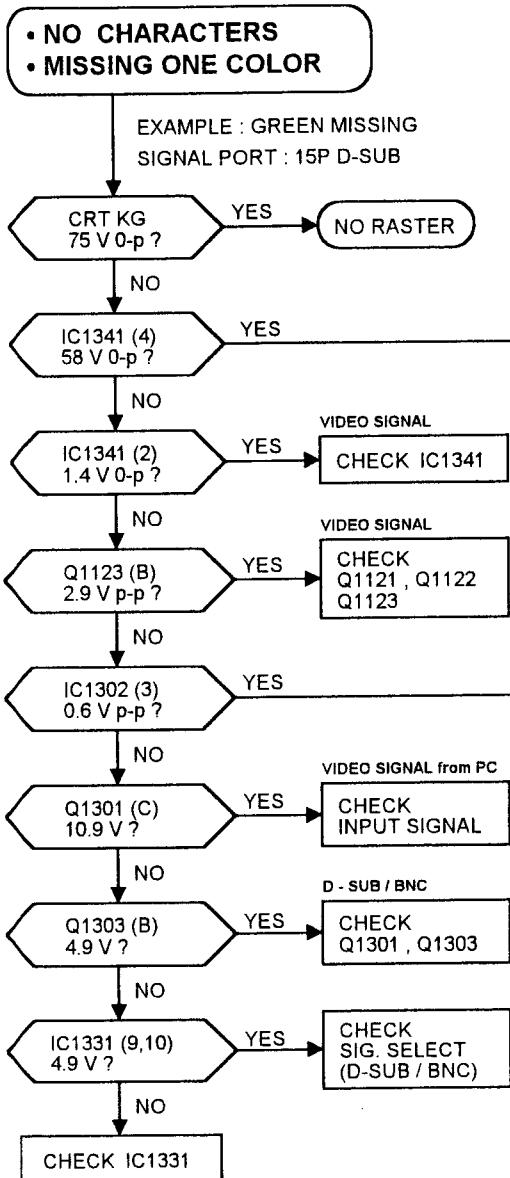


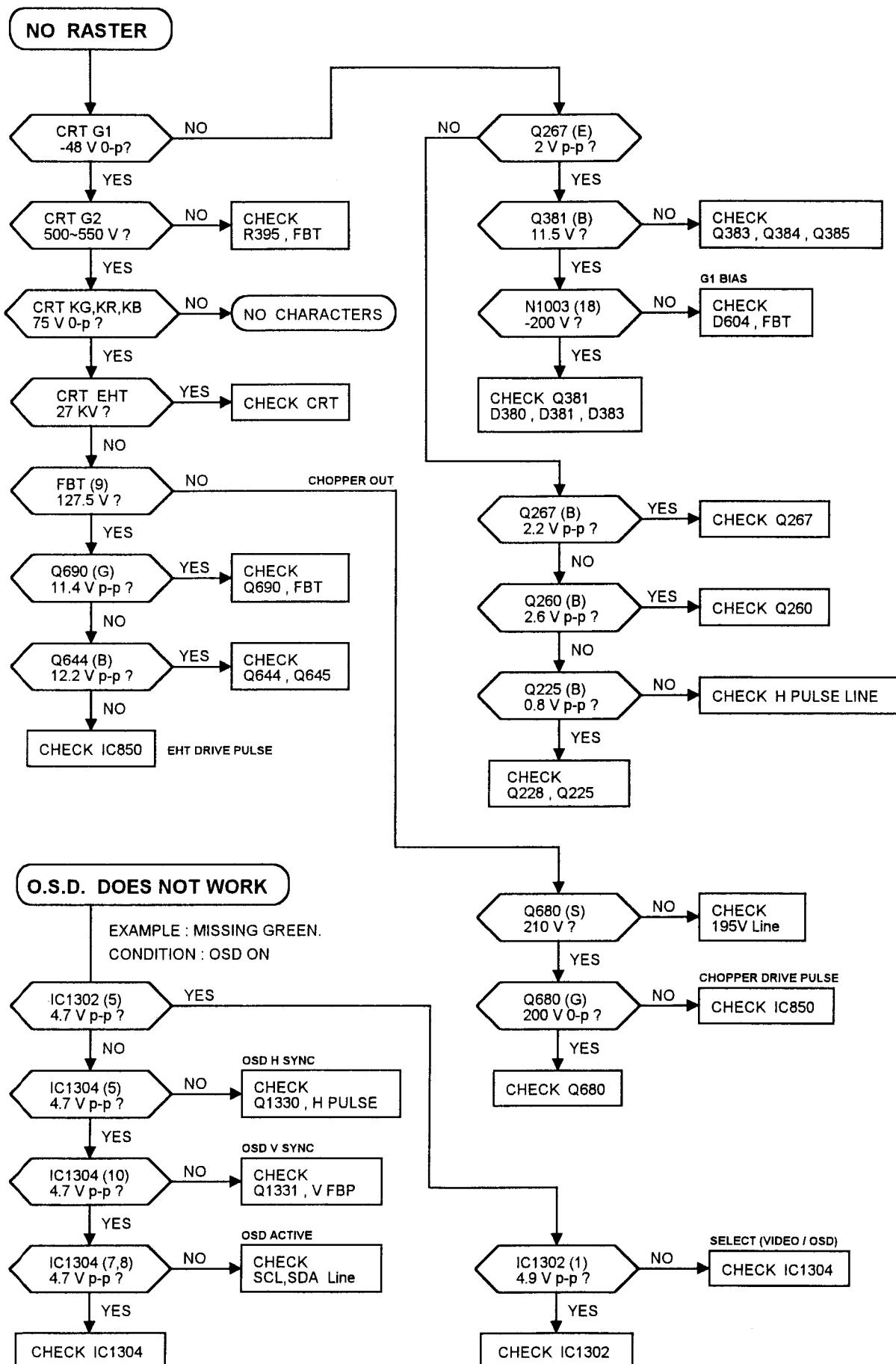
TNPH0089

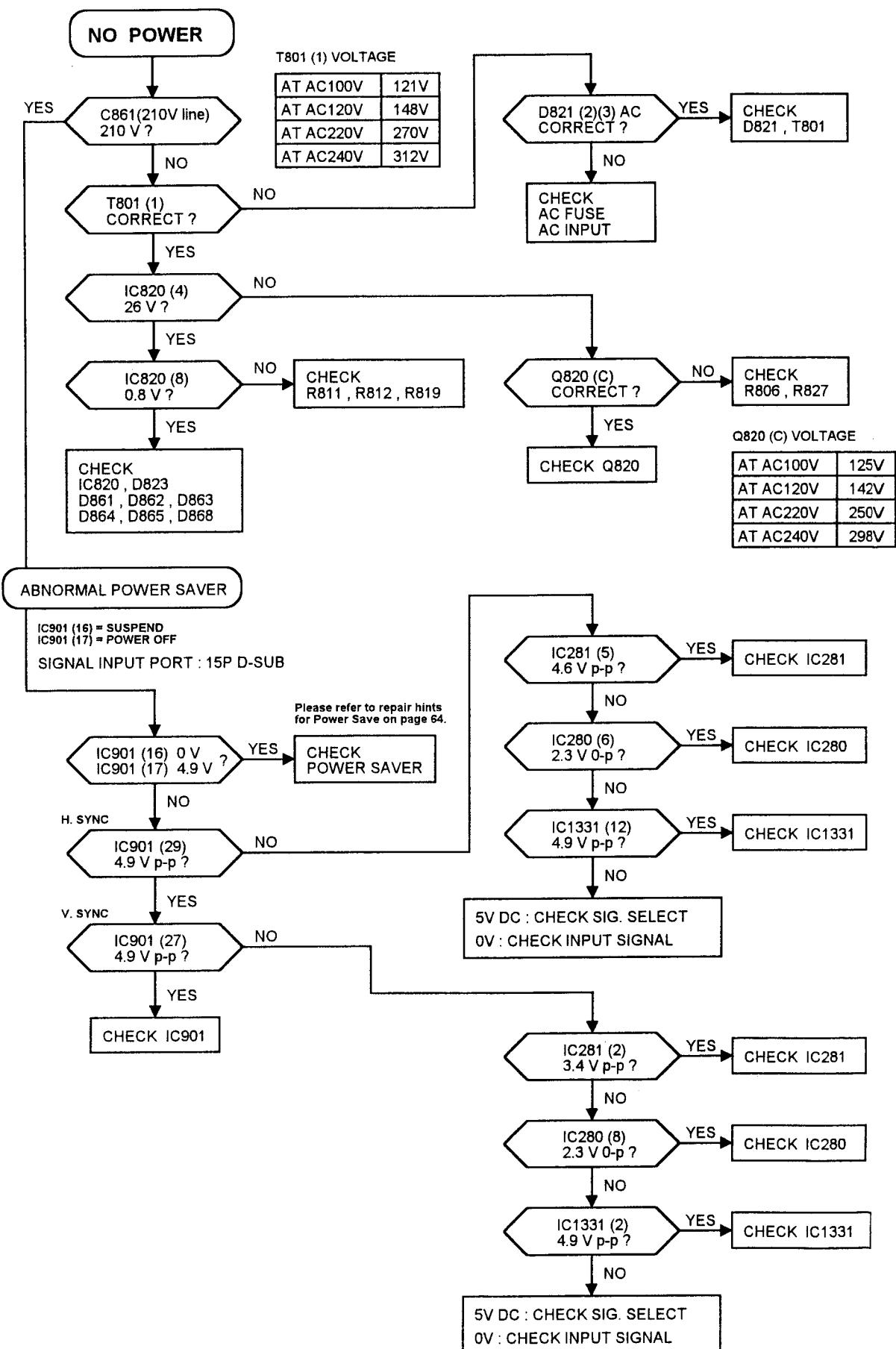


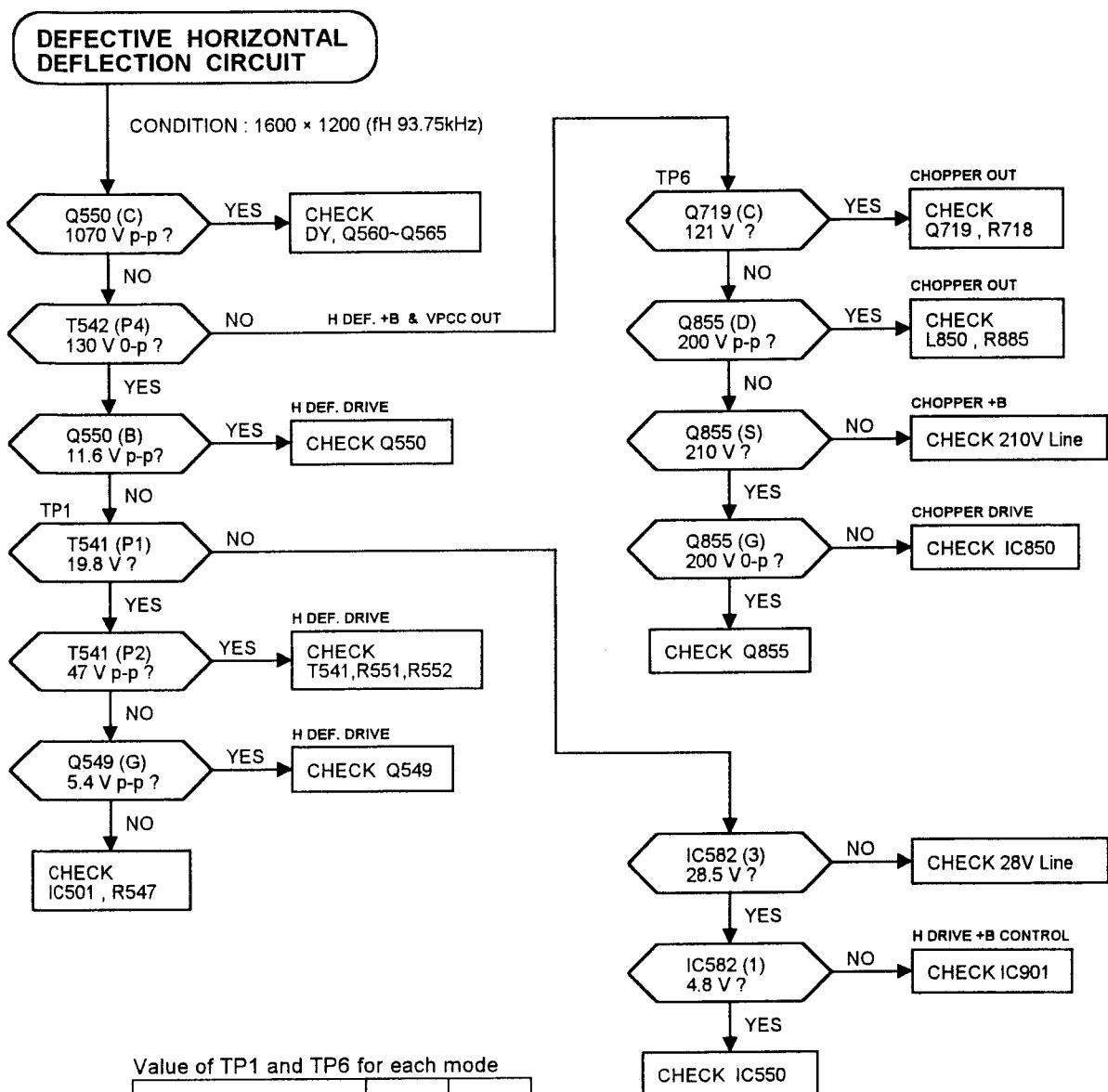
TNPH0089 △

## TROUBLE SHOOTING HINTS





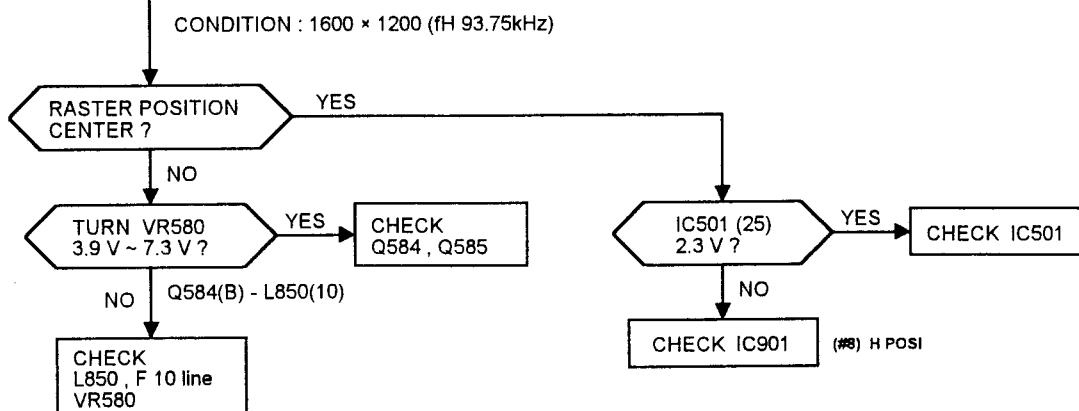




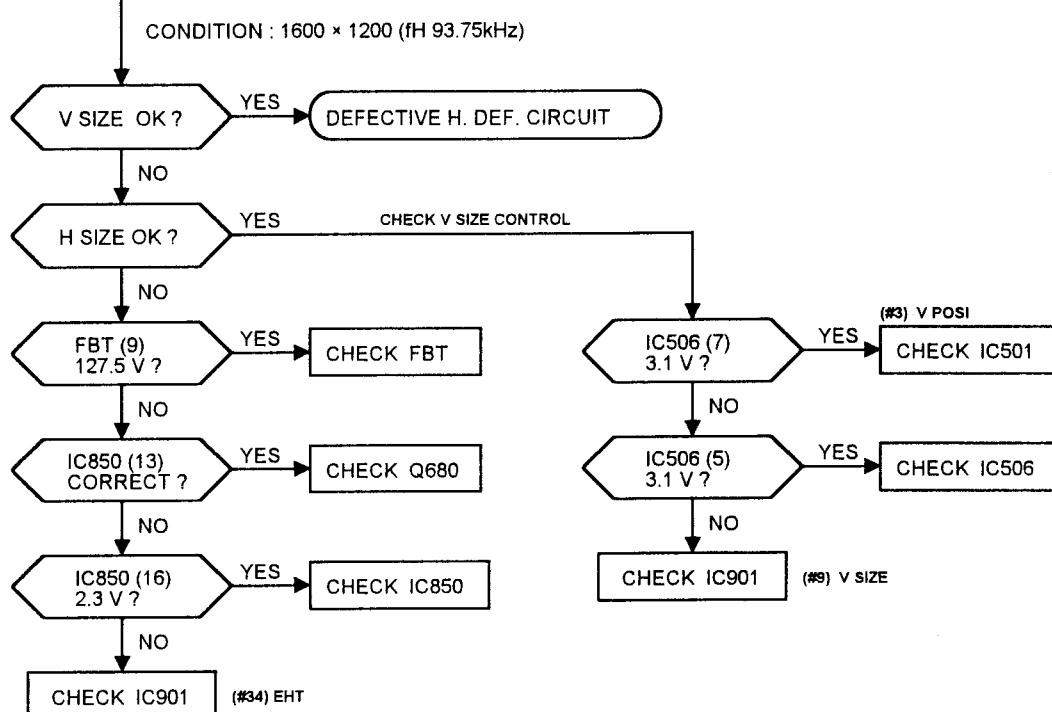
Value of TP1 and TP6 for each mode

MODE	TP1	TP6
MODE - 1 (fH 93.8kHz)	19.8 V	127.5 V
MODE - 2 (fH 31.5kHz)	23.7 V	74.3 V
MODE - 3 (fH 46.9kHz)	23.0 V	53.5 V
MODE - 4 (fH 60.0kHz)	22.3 V	70.8 V
MODE - 5 (fH 68.7kHz)	22.1 V	83.4 V
MODE - 6 (fH 63.3kHz)	22.3 V	75.4 V
MODE - 7 (fH 80.0kHz)	20.8 V	101.3 V
MODE - 8 (fH 87.5kHz)	20.5 V	115.6 V

### INCORRECT H. POSITION CONTROL

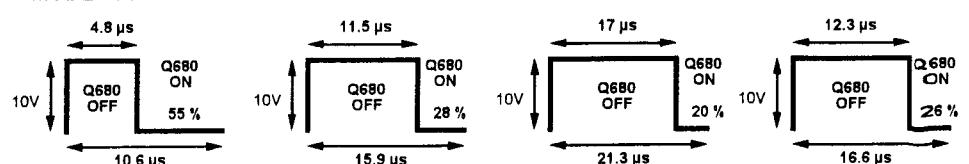


### INCORRECT SCREEN SIZE



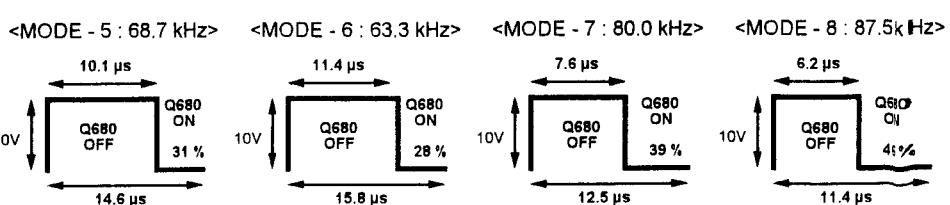
#### IC850 (13) Wave

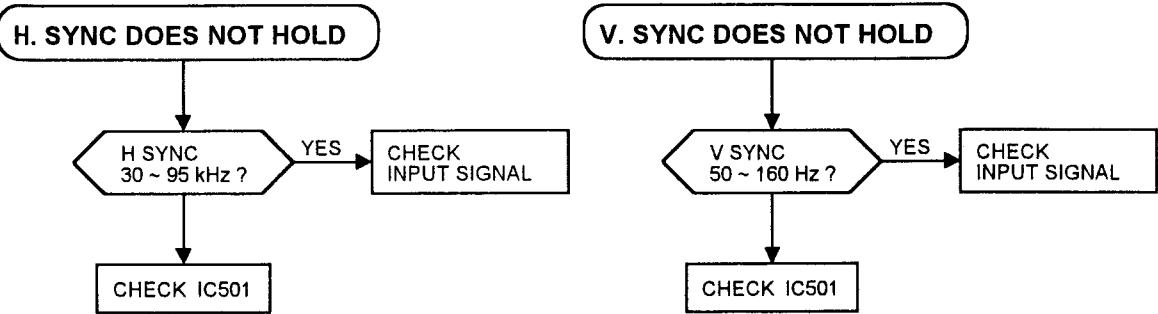
IC850 (20) [2FH]	
30~40 kHz	HIGH
40~95 kHz	LOW



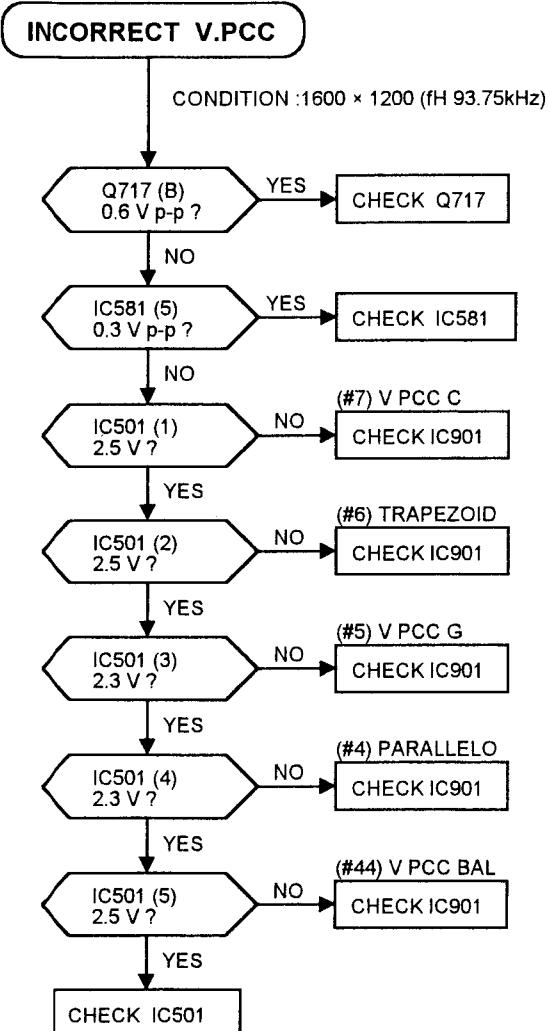
When Low level is applied to 20 pin, IC850 will supply  $\times 2$  fH signal to Q680 and Q690.

(IC850 13 & 23 pin)

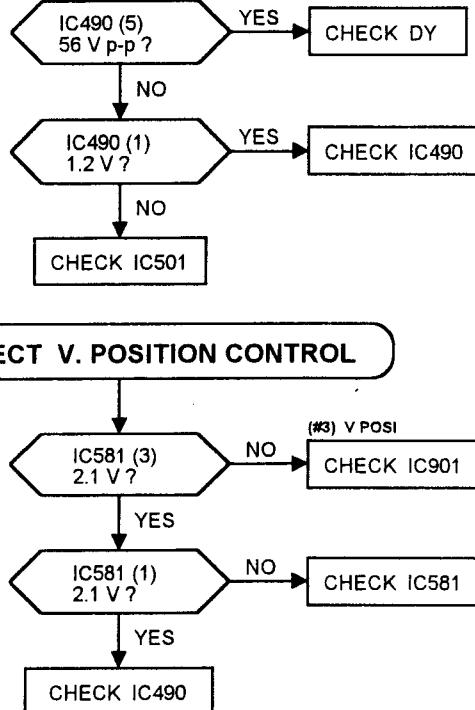




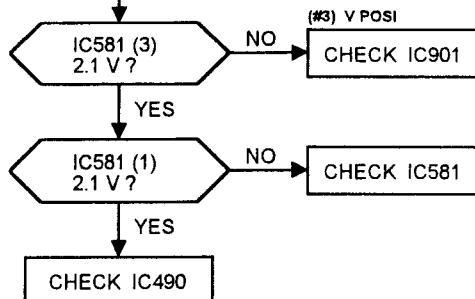
If no horizontal and/or vertical sync from PC,  
then the power save circuit becomes active.



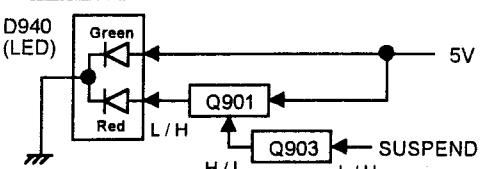
### BRIGHT HORIZONTAL LINE APPEARS ON THE SCREEN



### INCORRECT V. POSITION CONTROL

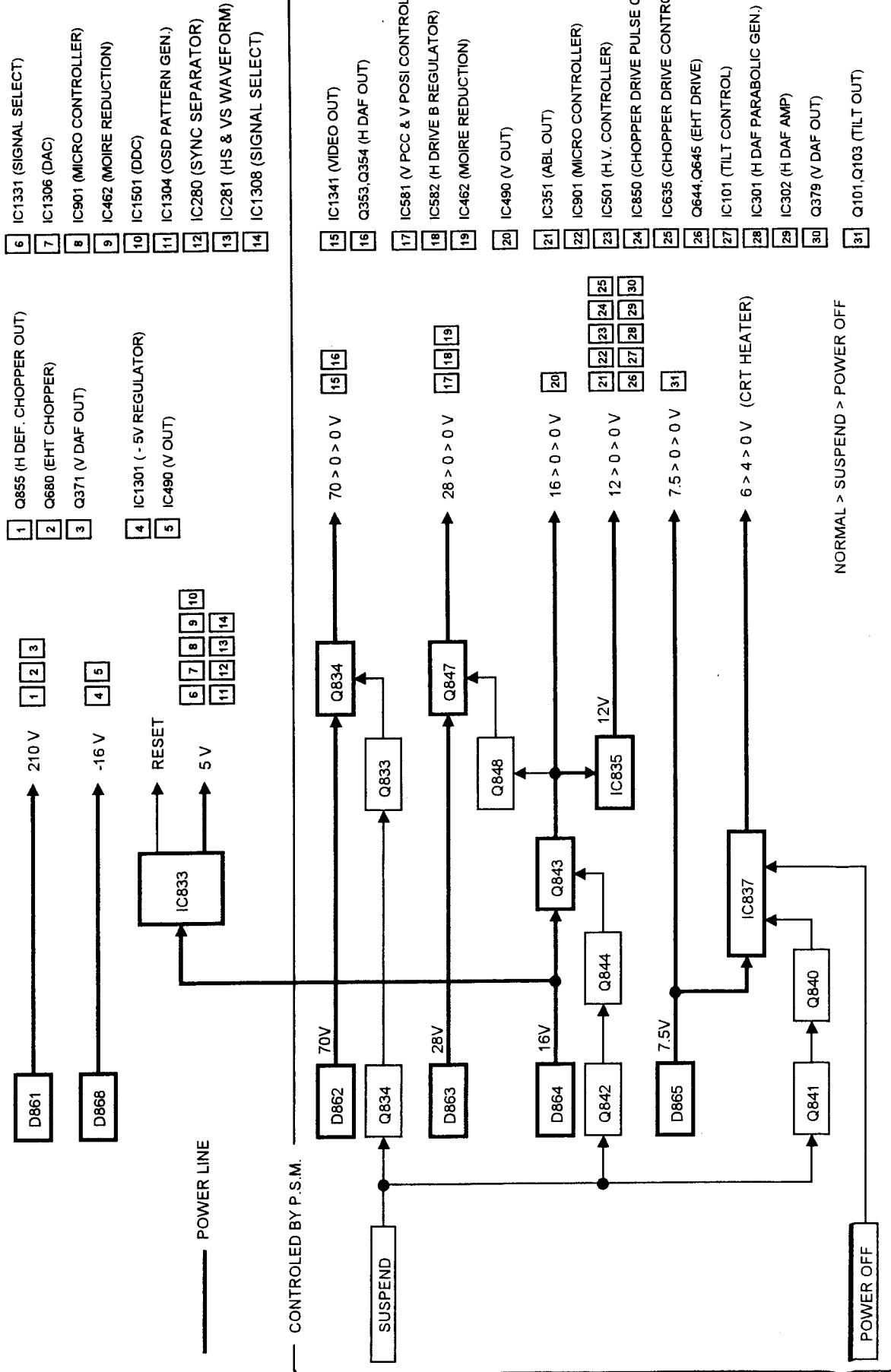


### ABNORMAL POWER INDICATOR



HS	VS	SUSPEND	COLOR
ON	ON	LOW	GREEN
OFF	ON	HIGH	YELLOW
ON	OFF	HIGH	YELLOW
OFF	OFF	HIGH	YELLOW

## REPAIR HINTS FOR POWER SAVE (HV8SA CHASSIS)

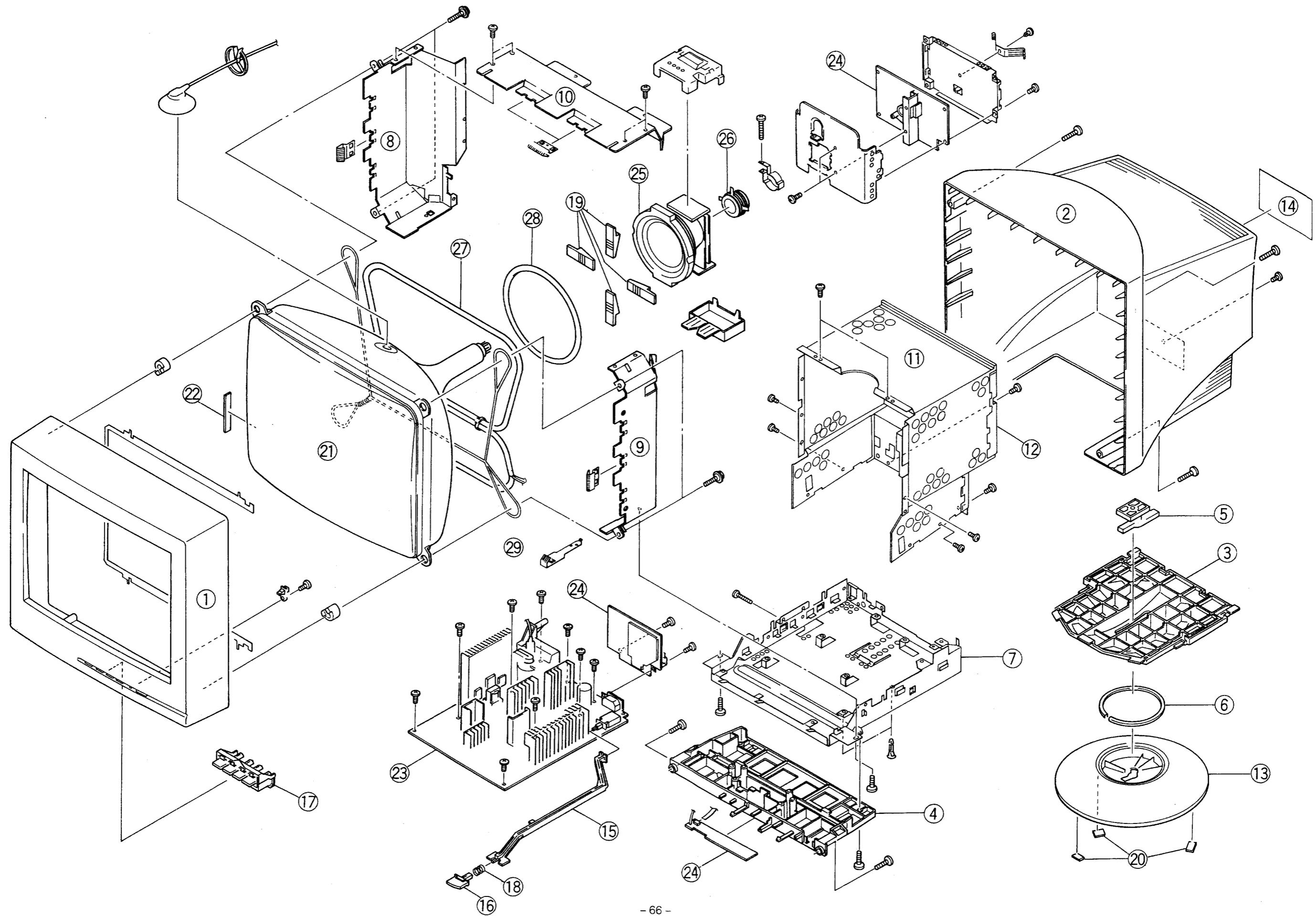




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## EXPLODED VIEW

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## REPLACEMENT PARTS LIST

### Important Safety Notice

Components identified by the International symbol  have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

#### RESISTOR

PART NAME & DESCRIPTION	
TYPE	ALLOWANCE
C Carbon	F ± 1%
F Fuse	J ± 5%
M Metal Oxide	K ± 10%
S Solid	M ± 20%
W Wire Wound	G ± 2%

#### CAPACITOR

PART NAME & DESCRIPTION	
TYPE	ALLOWANCE
C Ceramic	C ± 0.25pF
E Electrolytic	D ± 0.5pF
P Polyester	F ± 1pF
S Styrol	J ± 5%
T Tantalum	K ± 10%
PP Polypropylene	L ± 15%
	M ± 20%
	P +100% - 0%
	Z +80% - 20%

Part No. Description  
Example ERD25TJ104 (C) 100K (J) 1/4W

Part No. Description  
Example ECKF1H103ZF (C) 0.01μF (Z) 50V

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
	CABINET & MAIN PARTS				
1	TTYA06702-1	ESCUTCHEON	19	TMM81499	PUSH RIVET
2	TKUC03532	REAR COVER		TMM85576-1	CRT RUBBER
3	TKSG001-A02	BOTTOM CABINET		TMM85586	RUBBER(WEDGE)
4	TKSG004-A02	BASE CABINET		TMM87408	LEAD CLAMPER(SMALL)
	TKPA13802	FRONT PANEL		TMX13418	PCB SPACER
	TKKC5042	LED GUIDE	20	TMKG032	CRT RUBBER
	TKKL5019-1	BLIND COVER		TMKG035	Sponge
	5 TKXK5010	CENTER POST		TMKG067	RUBBER CUSHION(BIG)
	6 TKXK5011-1	SPACER RING		TMK84990	SET LEG
	TKK859745	CONNECTOR COVER		TMK85572	FERRITE STICK
	7 TUAA03601-1	BOTTOM PLATE		TQFX040	CONDUCTIVE SHEET
	TSAA3004	RADIATOR		HTH1028	SCREW(FOR CRT)
	8 TUCC5083	SHIELD CASE(CRT)R		HTH1069	SCREW(FOR SHIELD CASE)
	9 TUCC5084	SHIELD CASE(CRT)L		XTB4+12J	SCREW
10	TUCC5085	SHIELD CASE BRACKET		XTN5+16A	SCREW
	11 TUCC5115	SHIELD CASE		XTN5+25A	SCREW
	12 TUCC5116	SHIELD CASE(REA)		XTV3+10A	SCREW
	13 TBLB3002-A02	PEDESTAL		XTV3+20J	SCREW
	14 TBMC822	MODEL NAME LABEL<-M>		XTV3+8A	SCREW
	14 TBMC823	MODEL NAME LABEL<-E>		XYA4+EF8	SCREW
	15 TBXA04401	POWER SWITCH SHAFT		XYE3+EJ10	SCREW
	16 TBXA09602	KNOB(POWER SWITCH)		M51KYY540X	COLOR PICTURE TUBE
	17 TBXA09702	KNOB(CONTROL)		TNPA0354-22	PC BOARD W/COMPONENT(TCO)
	TESAO12	SPRING(CRT EARTH)TOP/SIDE		TNP0089-25	PC BOARD W/COMPONENT(MAIN)
	TESAO25	SPRING(CRT EARTH)BOTTOM		24 TXANP3162PNT	PC BOARD W/COMPONENT(VIDEO INPUT/CRT/KBD)
	18 TESD008	SPRING(POWER SWITCH)		25 MEY51LHB	DEFLECTION YOKE
	TESD009	FBT SPRING		26 TLCB006-1	CONVERGENCE COIL
	TES8586	EARTH SPRING		27 TSPA026-6	DEGAUSS COIL
	TMME023	ILT COIL CLAMPER(BIG)		28 TSPF004-2	ILT COIL
	TMME030	DEGAUSS COIL CLAMPER(M)		TSXF089	SIGNAL CORD
	TMME035	DEGAUSS COIL CLAMPER/SIDE		TSXL029-1	FLAT CORD(18P)
	TMME15404-1	SPACER RING		TSXL030	FLAT CORD(5P)
	TMM16452	ILT COIL CLAMPER		TSXA023	POWER CORD<-M>
	TMM6463	CLAMPER		TSX8484	POWER CORD<-E>
				TSXX053	4P CONNECTOR ASSY

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
	TXA3A22162NM	CRT EARTH LEAD	Q14	2SC4412-45	TRANSISTOR
	TSMA003	MAGNET	Q15	2SA1682-45	TRANSISTOR
	T4F31519Q	POLYESTER TAPE(50M)	Q101	2SD1994AR	TRANSISTOR
	T4F72425Q	COTTON TAPE(55M)	Q102	2SB1322AR	TRANSISTOR
	T4F90240	MAIRA TAPE	Q103	2SD1994AR	TRANSISTOR
	TPCA37202	OUTER CARTON	Q104	2SB1322AR	TRANSISTOR
	TPDF0143	PEDESTAL PAD	Q225	2SC3938R	TRANSISTOR
	TXAPD1D2171T	FILLER(TOP)	Q228	2SC3938R	TRANSISTOR
	TXAPD2D2162B	FILLER(BOTTOM)	Q260	2SC3938R	TRANSISTOR
	TPE894011-2	SET COVER	Q267	2SC3938R	TRANSISTOR
	TQE8513-2	FUN BAG COVER	Q280	2SC3938R	TRANSISTOR
	TQBE0138	INSTRUCTION BOOK	Q281	UN5111AI	TRANSISTOR
	TQZX019-1	CONFORMITY SHEET<-M>	Q351	2SA1576A	TRANSISTOR
	TQZX020-1	CONFORMITY SHEET<-E>	Q352	2SC1473AR	TRANSISTOR
	TQFA273	PTB LABEL(INNER)	Q353	2SD1264PLB	TRANSISTOR
	TQFA343	BAR CODE LABEL	Q354	2SB940PLB	TRANSISTOR
	TQF80720	NHW LABEL	Q371	2SC4620V25	TRANSISTOR
	TQF82880	HIGH VOLTAGE LABEL	Q379	2SC4081R	TRANSISTOR
	TQF83825-6	SERIAL NO. LABEL	Q381	2SA1767Q	TRANSISTOR
	TQF85363-1	CARTON LABEL<-M>	Q383	UN5211AI	TRANSISTOR
	TQF85363-8	CARTON LABEL<-E>	Q384	UN5211AI	TRANSISTOR
	TQF86608	EARTH CAUTION LABEL	Q385	UN5111AI	TRANSISTOR
	I.C		Q401	UN5211AI	TRANSISTOR
	IC101	LM324MX	Q451	UN5211AI	TRANSISTOR
	IC280	M52347SP	Q501	UN5211AI	TRANSISTOR
	IC281	MC74HC86FL2	Q549	2SK1474	TRANSISTOR
	IC301	TVS1093	Q550	2SC5243002FD	TRANSISTOR
	IC302	LF353MX	Q560	UN5211AI	TRANSISTOR
	IC351	LM358MX	Q561	2SK2135	TRANSISTOR
	IC462	BX8318A	Q562	UN5211AI	TRANSISTOR
	IC490	STV9379	Q563	2SK2135	TRANSISTOR
	IC501	UPC1883	Q564	UN5211AI	TRANSISTOR
	IC503	AN78L09M	Q565	2SK2135	TRANSISTOR
	IC506	LM324MX	Q566	UN5211AI	TRANSISTOR
	IC581	LM358MX	Q567	2SK2135	TRANSISTOR
	IC582	AN6531	Q571	2SC4081R	TRANSISTOR
	IC599	LM358MX	Q584	2SD2133S	TRANSISTOR
	IC635	LM393MX	Q585	2SB1413S	TRANSISTOR
	IC820	STR-S6531	Q586	2SD1949Q	TRANSISTOR
	IC833	L78MRO5	Q644	2SA1577R	TRANSISTOR
	IC835	M5F7812L	Q645	2SA1577R	TRANSISTOR
	IC837	SI-3025F	Q680	2SJ306MRB	TRANSISTOR
	IC850	M62500FP	Q690	IRFPF50	TRANSISTOR
	IC899	AN78L08	Q717	2SC1473QNC	TRANSISTOR
	IC901	TVSA0095	Q719	2SD1641	TRANSISTOR
	IC1301	AN79M05FLB	Q820	2SC4620V25	TRANSISTOR
	IC1302	M52722SP	Q824	2SD1820AR	TRANSISTOR
	IC1303	TA76431S	Q825	2SB1220R	TRANSISTOR
	IC1304	LSC4317P	Q826	2SB1320AR	TRANSISTOR
	IC1306	MB88141PFTF	Q830	2SD1949Q	TRANSISTOR
	IC1307	STK190-110	Q831	2SD1821S	TRANSISTOR
	IC1308	MM74HCOOMX	Q832	2SB940P	TRANSISTOR
	IC1309	LM358MX	Q833	2SD1821S	TRANSISTOR
	IC1331	MM74HCTOOMX	Q834	UN5211AI	TRANSISTOR
	IC1341	MHW3628	Q840	2SD1949Q	TRANSISTOR
	IC1501	24LC21TISN	Q841	UN5211AI	TRANSISTOR
	TRANSISTORS		Q842	UN5211AI	TRANSISTOR
	Q11	2SK1848	Q843	2SB941P	TRANSISTOR
	Q12	2SD602R	Q844	2SD1949Q	TRANSISTOR
	Q13	2SC4080DETD	Q847	2SB941P	TRANSISTOR
			Q848	2SD1949Q	TRANSISTOR
			Q851	2SA1577R	TRANSISTOR
			Q855	2SJ306MRB	TRANSISTOR

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
Q901	UN5111AI	TRANSISTOR	D385	MA8056M	DIODE
Q902	UN5211AI	TRANSISTOR	D401	ERA1502	DIODE
Q903	UN5211AI	TRANSISTOR	D402	MA728	DIODE
Q1021	2SC4270	TRANSISTOR	D403	1SS353	DIODE
Q1022	2SA1764	TRANSISTOR	D421	1SS353	DIODE
Q1023	2SC4270	TRANSISTOR	D440	MA4051NM	DIODE
Q1052	2SC4412-45	TRANSISTOR	D505	MA4062NM	DIODE
Q1121	2SC4270	TRANSISTOR	D507	MA4051NM	DIODE
Q1122	2SA1764	TRANSISTOR	D550	FMQ-G5GSLF	DIODE
Q1123	2SC4270	TRANSISTOR	D551	ERA81004	DIODE
Q1152	2SC4412-45	TRANSISTOR	D552	1SS353	DIODE
Q1221	2SC4270	TRANSISTOR	D553	MA4150NM	DIODE
Q1222	2SA1764	TRANSISTOR	D571	1SS353	DIODE
Q1223	2SC4270	TRANSISTOR	D581	ERC30-02	DIODE
Q1252	2SC4412-45	TRANSISTOR	D582	ERC30-02	DIODE
Q1301	XDA114EU	TRANSISTOR	D584	MA162A	DIODE
Q1302	XDA114EU	TRANSISTOR	D585	MA162A	DIODE
Q1303	XDC114EU	TRANSISTOR	D602	MA167	DIODE
Q1304	XDC114EU	TRANSISTOR	D603	EG01A	DIODE
Q1310	UN5211AI	TRANSISTOR	D604	EG01A	DIODE
Q1315	2SA1739R	TRANSISTOR	D605	MA4047NH	DIODE
Q1316	XDC114EU	TRANSISTOR	D606	1SS353	DIODE
Q1321	2SC1473AR	TRANSISTOR	D635	MA4180NM	DIODE
Q1322	2SC1473AR	TRANSISTOR	D652	MA4051NM	DIODE
Q1330	UN5211AI	TRANSISTOR	D680	MA4091NM	DIODE
Q1331	UN5211AI	TRANSISTOR	D681	CB903-4	DIODE
	DIODES		D682	CB903-4	DIODE
D10	MA8150M	DIODE	D690	MA4200NM	DIODE
D11	MA153A	DIODE	D714	MA142K	DIODE
D12	MA4150NM	DIODE	D715	MA143A	DIODE
D13	MA174	DIODE	D716	MA142K	DIODE
D14	1SS353	DIODE	D717	MA28T-A	DIODE
D15	MA2330B	DIODE	D719	EM01Z	DIODE
D201	MA4056NM	DIODE	D801	TVSD0003	DIODE
D202	MA4056NM	DIODE	D809	MA111	DIODE
D210	1SS353	DIODE	D810	MA8240M	DIODE
D211	1SS353	DIODE	D811	MA111	DIODE
D212	1SS353	DIODE	D812	MA111	DIODE
D213	MA8051M	DIODE	D820	MA8180H	DIODE
D231	MA8056M	DIODE	D821	RBV606	DIODE
D232	MA8056M	DIODE	D822	RG2A2	DIODE
D233	MA8056M	DIODE	D823	EG01	DIODE
D234	MA8056M	DIODE	D826	MA8056M	DIODE
D250	MA8056M	DIODE	D830	1SS353	DIODE
D251	MA8056M	DIODE	D831	ERA1502	DIODE
D252	MA8056M	DIODE	D832	MA167	DIODE
D260	MA111	DIODE	D850	1SS353	DIODE
D261	1SS353	DIODE	D851	1SS353	DIODE
D262	1SS353	DIODE	D855	MA4091NM	DIODE
D266	MA111	DIODE	D856	CB903-4	DIODE
D304	MA8056M	DIODE	D858	MA4068NL	DIODE
D351	1SS353	DIODE	D861	FMC-26UALF	DIODE
D352	MA4390NM	DIODE	D862	ERC3806	DIODE
D353	MA4390NM	DIODE	D863	TVSRG2	DIODE
D354	MA4390NM	DIODE	D864	FML-G12S	DIODE
D355	MA8120M	DIODE	D865	ERC91-02	DIODE
D356	MA199	DIODE	D868	RN3Z014-305	DIODE
D380	HZT33-09F12	DIODE	D870	MA8056M	DIODE
D381	HZT33-09F12	DIODE	D898	MA142WK	DIODE
D382	MA8091H	DIODE	D902	MA4270NH	DIODE
D383	EU02Z	DIODE	D903	MA4056NM	DIODE
			D904	MA4056NM	DIODE

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
D905	MA4051NM	DIODE	D1336	MA8027H	DIODE
D907	MA4056NM	DIODE	D1337	1SS353	DIODE
D920	MA8056H	DIODE	D1380	MA8047H	DIODE
D921	MA8056H	DIODE	D1381	MA8051M	DIODE
D922	MA8056H	DIODE	D1382	ERA82-004	DIODE
D923	MA8056H	DIODE	D1401	1SS353	DIODE
D940	SML1816W	DIODE(LED)	D1402	1SS353	DIODE
D953	MA4056NM	DIODE	D1501	MA728	DIODE
D954	MA4056NM	DIODE			COIL & TRANSFORMERS
D955	MA4056NM	DIODE	L280	TSK8029	FERRITE CORE
D978	MA4056NM	DIODE	L301	ELJUPA390KB	CHIP COIL
D979	MA4056NM	DIODE	L381	EXCELDR35C	LC COMBINATION
D980	MA4082NM	DIODE	L383	EXCELDR35C	LC COMBINATION
D1001	MA111	DIODE	L550	EXCELSR35S	LC COMBINATION
D1002	MA111	DIODE	L551	EXCELSR35S	LC COMBINATION
D1003	MA111	DIODE	△ L573	ELHKLBO21B	COIL
D1004	MA111	DIODE	△ L574	ELHKLBO23B	COIL
D1011	MA111	DIODE	L575	TLH85815T	COIL
D1012	MA111	DIODE	L580	TLUACNB2R2M	PEAKING COIL
D1013	MA111	DIODE	L599	TLUACNB102J	PEAKING COIL
D1014	MA111	DIODE	L680	EXCELDR35C	LC COMBINATION
D1021	DCC010	DIODE	△ L681	TLP85708R	CHOKE COIL
D1040	1SS376	DIODE	L682	EXCELSA35T	LC COMBINATION
D1041	1SS376	DIODE	△ L801	ELF18D656Y	LINE FILTER
D1052	MA167A	DIODE	△ L802	ELF18D656Y	LINE FILTER
D1101	MA111	DIODE	L806	TSK8031	FERRITE CORE
D1102	MA111	DIODE	L807	TSK8031	FERRITE CORE
D1103	MA111	DIODE	L808	TLPF066	CHOKE COIL
D1104	MA111	DIODE	△ L850	TLP85709R	CHOKE COIL
D1111	MA111	DIODE	L861	EXCELDR35C	LC COMBINATION
D1112	MA111	DIODE	L862	EXCELDR35C	LC COMBINATION
D1113	MA111	DIODE	L863	EXCELDR35C	LC COMBINATION
D1114	MA111	DIODE	L864	EXCELDR35C	LC COMBINATION
D1121	DCC010	DIODE	L865	EXCELDR35C	LC COMBINATION
D1140	1SS376	DIODE	L868	EXCELDR35C	LC COMBINATION
D1141	1SS376	DIODE	L901	TLU101K106	PEAKING COIL
D1152	MA167A	DIODE	L1040	ELJNCR18JB	CHIP COIL
D1201	MA111	DIODE	L1140	ELJNCR18JB	CHIP COIL
D1202	MA111	DIODE	L1240	ELJNCR15JB	CHIP COIL
D1203	MA111	DIODE	L1310	EXCELDR35C	LC COMBINATION
D1204	MA111	DIODE	L1320	EXCELDR35C	LC COMBINATION
D1211	MA111	DIODE	L1330	ELEXH151KA	PEAKING COIL
D1212	MA111	DIODE	L1342	EXCELDR35C	LC COMBINATION
D1213	MA111	DIODE	L1343	EXCELDR35C	LC COMBINATION
D1214	MA111	DIODE	L1350	EXCELDR35C	LC COMBINATION
D1221	DCC010	DIODE	L1360	TSK8029	FERRITE CORE
D1240	1SS376	DIODE	△ T351	TLHG010	D.A.F. TRANSFORMER
D1241	1SS376	DIODE	△ T541	ETH19K179AM	H. DRIVE TRANSFORMER
D1252	MA167A	DIODE	△ T542	ETS29AC1Z9AC	TRANSFORMER
D1303	MA142K	DIODE			CONTROL
D1304	MA142K	DIODE	VR580	EVND1AA00B13	CONTROL B 1K OHM
D1305	MA142K	DIODE	VR881	EVNDXA03B13	CONTROL B 1K OHM
D1306	MA142K	DIODE			CAPACITORS
D1310	MA8056M	DIODE	C11	ECQV1H334JL	P 0.33UF J 50V
D1311	MA8056M	DIODE	C13	ECUX1H104ZFX	C 0.1UF Z 50V
D1316	MA8056M	DIODE	C14	ECUX1H104ZFX	C 0.1UF Z 50V
D1320	ERA1502	DIODE			
D1321	1SS376	DIODE			
D1330	MA8056M	DIODE			
D1332	MA8056M	DIODE			
D1333	MA8056M	DIODE			
D1335	MA8056M	DIODE			

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description				
C16	ECUX1H272KBN	C	2700PF	K	50V	C415	ECUX1H102KBN	C	1000PF	K	50V
C17	ECQE2104KF	P	0.1UF	K	200V	C417	ECQV1H334JL	P	0.33UF	J	50V
C106	ECUX1E334ZFW	C	0.33UF	Z	25V	C418	ECUX1H103KBG	C	0.01UF	K	50V
C107	ECEA1HGE4R7	E	4.7UF		50V	C421	ECEA1CGE1O1	E	100UF		16V
C108	ECEA1HGE4R7	E	4.7UF		50V	C422	ECEA1HGE100	E	10UF		50V
C112	ECUX1E334ZFW	C	0.33UF	Z	25V	C423	ECUX1H103KBG	C	0.01UF	K	50V
C201	ECUX1H100DCN	C	10PF	D	50V	C497	ECEA1HGE221	E	220UF		50V
C202	ECUX1H101JCG	C	100PF	J	50V	C498	ECQE1563KF	P	0.056UF	K	100V
C210	ECUX1H221JCG	C	220PF	J	50V	C501	ECUX1H104ZFX	C	0.1UF	Z	50V
C260	ECQE2104KF	P	0.1UF	K	200V	C502	ECEA1CGE221	E	220UF		16V
C261	ECUX1E683KBX	C	0.068UF	K	25V	C504	ECEA1EGE100	E	10UF		25V
C262	ECUX1H102KBN	C	1000PF	K	50V	C505	ECUX1H272KBN	C	2700PF	K	50V
C263	ECUX1H220JCN	C	22PF	J	50V	C506	ECUX1H681KBN	C	680PF	K	50V
C269	TCUX2H101JCM	C	100PF	J	500V	C507	ECUX1C474ZFX	C	0.47UF	Z	16V
C280	ECUX1H103KBG	C	0.01UF	K	50V	C509	ECUX1H104ZFX	C	0.1UF	Z	50V
C281	ECEA1HKG010	E	1UF		50V	C510	ECUX1H680JCG	C	68PF	J	50V
C282	ECEA1HKG2R2	E	2.2UF		50V	C511	ECUX1H102KBN	C	1000PF	K	50V
C283	ECEA1CKG220	E	22UF		16V	C512	ECUX1H104KBW	C	0.1UF	K	50V
C287	ECEA1HKG4R7	E	4.7UF		50V	C513	ECUX1H102KBN	C	1000PF	K	50V
C288	ECUX1H103KBG	C	0.01UF	K	50V	C514	ECEA1CGE101	E	100UF		16V
C290	ECEA1HKG4R7	E	4.7UF		50V	C515	ECEA1HGN1R7	E	4.7UF		50V
C291	ECEA1HKG2R2	E	2.2UF		50V	C516	ECEA1HGE2R2	E	2.2UF		50V
C292	ECUX1H101JCG	C	100PF	J	50V	C517	ECUX1H104ZFX	C	0.1UF	Z	50V
C293	ECUX1H221JCG	C	220PF	J	50V	C551	ECEA1VGE1O1	E	100UF		35V
C294	ECUX1H103KBG	C	0.01UF	K	50V	C552	ECKD2H332KB5	C	3300PF	K	500V
C295	ECEA1CKG470	E	47UF		16V	C553	ECWH15H222HN	PP	2200PF	H	1.5KV
C301	ECUX1H820JCG	C	82PF	J	50V	C554	ECWH15H222HN	PP	2200PF	H	1.5KV
C302	ECUX1H330JCG	C	33PF	J	50V	C555	ECQE2335KF	C	3.3UF	K	200V
C304	ECUX1H821JCG	C	820PF	J	50V	C561	ECWF2824HBB	PP	0.82UF	H	200V
C305	ECEA1HGE010	E	1UF		50V	C563	ECWF2364HBB	PP	0.36UF	H	200V
C306	ECEA1HGE010	E	1UF		50V	C565	ECWF2154HBB	PP	0.15UF	H	200V
C307	ECUX1H101JCG	C	100PF	J	50V	C567	ECWF2185HBB	PP	1.8UF	H	200V
C308	ECUX1H103KBG	C	0.01UF	K	50V	C568	ECWF2154HBB	PP	0.15UF	H	200V
C309	ECUX1H103KBG	C	0.01UF	K	50V	C569	ECWF4184HBB	PP	0.18UF	H	400V
C310	ECEA1HGE100	E	10UF		50V	C573	ECKD2H102KB5	C	1000PF	K	500V
C311	ECUX1H910JCG	C	91PF	J	50V	C574	ECKD2H102KB5	C	1000PF	K	500V
C312	ECUX1H103KBG	C	0.01UF	K	50V	C577	ECUX1H103KBG	C	0.01UF	K	50V
C313	ECEA1CGE221	E	220UF		16V	C578	ECA1VHG470	E	47UF		35V
C316	ECUX1H221JCG	C	220PF	J	50V	C580	ECEA1CGE470	E	47UF		16V
C320	ECEA1HGE010	E	1UF		50V	C581	ECQE2224KF	P	0.22UF	K	200V
C351	ECEA1CGE470	E	47UF		16V	C582	ECA1EHG102	E	1000UF		25V
C352	ECEA2AGE100	E	10UF		100V	C583	ECUX1C105ZFW	C	1UF	Z	16V
C353	ECQV1474JM	P	0.47UF	J	100V	C584	ECUX1C105ZFW	C	1UF	Z	16V
C355	ECUX1H361JCG	C	360PF	J	50V	C586	ECUX1H103KBG	C	0.01UF	K	50V
C356	ECUX1H080DCN	C	8PF	D	50V	C588	ECUX1H103KBG	C	0.01UF	K	50V
C357	ECQE2104KF	P	0.1UF	K	200V	C592	ECQV1H105JL	P	1UF	J	50V
C371	ECA2EHG100	E	10UF		250V	C593	ECQV1H105JL	P	1UF	J	50V
C372	ECKD2H471KB5	C	470PF	K	500V	C599	ECEA1HGN100	E	10UF		50V
C385	ECA2CHG4R7	E	4.7UF		160V	C601	ECEA2AGE220	E	22UF		100V
C393	ECKD2H332KBP	C	3300PF	K	2KV	C603	ECA2EHG100	E	10UF		250V
C401	ECEA1HGE010	E	1UF		50V	C609	ECA2CHG2R2	E	2.2UF		160V
C402	ECUX1H103KBG	C	0.01UF	K	50V	C612	ECA2CHG100	E	10UF		160V
C403	ECUX1H103KBG	C	0.01UF	K	50V	C635	ECUX1C105ZFX	C	1UF	Z	16V
C404	ECUX1H103KBG	C	0.01UF	K	50V	C660	ECEA1HGE100	E	10UF		50V
C406	ECEA1CGE470	E	47UF		16V	C661	ECEA1CGE470	E	47UF		16V
C407	ECUX1H103KBG	C	0.01UF	K	50V	C663	ECUX1H104ZFX	C	0.1UF	Z	50V
C408	ECA1EHG471	E	470UF		25V	C664	ECEA1HGE010	E	1UF		50V
C409	ECQE1474KF	P	0.47UF	K	100V	C665	ECQV1H105JL	P	1UF	J	50V
C410	ECEA1HGE100	E	10UF		50V	C666	ECUX1H562KBG	C	5600PF	K	50V
C411	ECQV1473JM	P	0.047UF	J	100V	C667	ECUX1H101JCG	C	100PF	J	50V
C412	ECUX1H331KBN	C	330PF	K	50V	C671	ECUX1H102KBN	C	1000PF	K	50V
C413	ECA1EHG102	E	1000UF		25V	C672	ECUX1H104ZFX	C	0.1UF	Z	50V

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C674	ECUX1C105ZFX	C	1UF	Z	16V	C872	ECUX1H104ZFX	C	0.1UF	Z	50V
C679	ECQB2333KF	P	0.033UF	K	200V	C876	ECUX1H103KBN	C	0.01UF	K	50V
C680	ECUX1H102KBN	C	1000PF	K	50V	C877	ECUX1H221KBN	C	220PF	K	50V
C681	ECQE2474KF	P	0.47UF	K	200V	C879	TACCJ223P200	C	0.022UF		200V
C689	ECQE2224KF	P	0.22UF	K	200V	C880	ECEA1CGE470	E	47UF		16V
C690	ECWH12H272HS	PP	2700PF	H	1.2KV	C881	ECEA1HGE100	E	10UF		50V
C691	ECKD3D331JBP	C	330PF	J	2KV	C882	ECEA1HGE220	E	22UF		50V
C692	ECQB1H224JF	P	0.22UF	J	50V	C883	ECEA1HGE010	E	1UF		50V
C693	ECKF1H472KB	C	4700PF	K	50V	C884	ECUX1H104ZFX	C	0.1UF	Z	50V
C696	ECKD2H221KBN	C	220PF	K	500V	C885	ECQB2103KF	P	0.01UF	K	200V
C697	ECUX1H222KBN	C	2200PF	K	50V	C886	ECUX1H222KBN	C	2200PF	K	50V
C701	ECUX1H103KBN	C	0.01UF	K	50V	C887	ECUX1H681KBN	C	680PF	K	50V
C702	ECUX1H103KBN	C	0.01UF	K	50V	C888	ECQB2333KF	P	0.033UF	K	200V
C703	ECUX1H103KBN	C	0.01UF	K	50V	C889	ECA2DGE680Y	E	68UF		200V
C704	ECUX1H103KBN	C	0.01UF	K	50V	C890	ECUX1H392KBN	C	3900PF	J	50V
C707	ECUX1H103KBN	C	0.01UF	K	50V	C897	ECUX1C105ZFX	C	1UF	Z	16V
C709	ECEA1HGN100	E	10UF		50V	C901	ECEA1CGE470	E	47UF		16V
C712	ECUX1H103KBN	C	0.01UF	K	50V	C903	ECAOJFQ152	E	1500UF		6.3V
C715	ECA2CHG4R7	E	4.7UF		160V	C904	ECUX1H103KBN	C	0.01UF	K	50V
C718	ECUX1H103KBN	C	0.01UF	K	50V	C905	ECUX1H150JCN	C	15PF	J	50V
C719	ECQB2103KF	P	0.01UF	K	200V	C906	ECUX1H150JCN	C	15PF	J	50V
C720	ECQB2103KF	P	0.01UF	K	200V	C907	ECUX1H103KBN	C	0.01UF	K	50V
C730	ECEA1HGE101	E	100UF		25V	C951	ECEA1HGE2R2	E	2.2UF		50V
△ C802	ECQU2A334MVZ	PP	0.33UF	M	250V	C952	ECEA1HGE010	E	1UF		50V
△ C803	ECKDRS472ME	C	4700PF	M		C953	ECEA1HGE010	E	1UF		50V
△ C804	ECKDRS472ME	C	4700PF	M		C954	ECEA1HGE010	E	1UF		50V
△ C806	ECQU2A104MNF	PP	0.1UF	M	250V	C955	ECEA1HGE010	E	1UF		50V
△ C807	ECQU2A224MNF	PP	0.22UF	M	250V	C956	ECEA1HGE470	E	47UF		50V
C811	ECUX1H222KBN	C	2200PF	K	50V	C957	ECEA1HGE010	E	1UF		50V
C812	ECUX1H223KBN	C	0.022UF	K	50V	C958	ECEA1HGE2R2	E	2.2UF		50V
C813	ECUX1H104ZFX	C	0.1UF	Z	50V	C959	ECEA1HGE010	E	1UF		50V
C818	ECUX1H224ZFW	C	0.22UF	Z	50V	C960	ECEA1HGE010	E	1UF		50V
C819	ECQE2154KF	P	0.15UF	K	200V	C961	ECUX1H104ZFX	C	0.1UF	Z	50V
C820	ECEA1VGE221	E	220UF		35V	C962	ECEA1HGE010	E	1UF		50V
△ C821	TAC1094Z391A	E	390UF		400V	C963	ECEA1HGE330	E	33UF		50V
C822	ECQE2154KF	P	0.15UF	K	200V	C964	ECEA1HGE010	E	1UF		50V
C823	ECKD3A101KBP	C	100PF	K	1KV	C965	ECEA1HGE010	E	1UF		50V
C825	ECEA1HGE3R3	E	3.3UF		50V	C966	ECEA1HGE010	E	1UF		50V
C826	ECUX1H223KBN	C	0.022UF	K	50V	C967	ECEA1HGE010	E	1UF		50V
C827	ECUX1H681JCX	C	680PF	J	50V	C968	ECEA1HGE010	E	1UF		50V
C828	ECEA1HGE470	E	47UF		50V	C969	ECEA1HGE010	E	1UF		50V
C829	ECEA1HGE4R7	E	4.7UF		50V	C1001	ECEAOJKG221	E	220UF		6.3V
C830	ECEA1HGE4R7	E	4.7UF		50V	C1002	ECUX1H103KBN	C	0.01UF	K	50V
△ C831	ECKDRS332ME	C	3300PF	M		C1004	ECUX1H103KBN	C	0.01UF	K	50V
△ C832	ECKDRS332ME	C	3300PF	M		C1005	ECUX1H103KBN	C	0.01UF	K	50V
C833	ECUX1H472KBN	C	4700PF	K	50V	C1007	ECUX1H103KBN	C	0.01UF	K	50V
C834	ECUX1H470JCG	C	47PF	J	50V	C1008	ECUX1H103KBN	C	0.01UF	K	50V
C835	ECUX1H104ZFX	C	0.1UF	Z	50V	C1011	ECEAOJKG221	E	220UF		6.3V
C851	ECQE1224KF	P	0.22UF	K	100V	C1012	ECUX1H103KBN	C	0.01UF	K	50V
C855	ECUX1H223KBN	C	0.022UF	K	50V	C1021	ECUX1H103KBN	C	0.01UF	K	50V
C856	ECEA1HGE100	E	10UF		50V	C1022	ECUX1H103KBN	C	0.01UF	K	50V
C858	ECUX1H682KBN	C	6800PF	K	50V	C1023	ECEA1CGE100	E	10UF		16V
C859	ECQE2105KF	P	1UF	K	200V	C1026	ECUX1H103KBN	C	0.01UF	K	50V
C861	TAC1232E337	E	330UF		250V	C1028	ECUX1H103KBN	C	0.01UF	K	50V
C862	ECA2AHG331	E	330UF		100V	C1029	ECUX1C105ZFX	C	1UF	Z	16V
C863	ECA1VHG1O2	E	1000UF		35V	C1030	ECUX1H103KBN	C	0.01UF	K	50V
C864	ECA1EFQ182L	E	1800UF		25V	C1031	ECUX1H103KBN	C	0.01UF	K	50V
C865	EEUFA1C182	E	1800UF		16V	C1032	ECUX1H750JCG	C	75PF	J	50V
C866	ECUX1C105ZFX	C	1UF	Z	16V	C1033	ECUX1H150JCN	C	15PF	J	50V
C868	ECEA1HGE222	E	2200UF		25V	C1034	ECUX1H103KBN	C	0.01UF	K	50V
C869	ECEA1CGE331	E	330UF		16V	C1035	ECEA1CGE470	E	47UF		16V
C870	ECEAOJGE331	E	330UF		6.3V	C1036	ECEA1HGE2R2	E	2.2UF		50V

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
C1037	TACCJ1O3P200	C	0.01UF	200V	C1239	ECUX1H1O3KBG	C	0.01UF	K 50V
C1038	ECA1HEN010	E	1UF	50V	C1240	TACBH2A474MT	C	0.47UF	M 100V
C1039	ECUX1H1O3KBG	C	0.01UF	K 50V	C1242	TACCU1O2P500	C	1000PF	500V
C1040	TACBH2A474MT	C	0.47UF	M 100V	C1243	ECEA2AGE100	E	10UF	100V
C1042	TACCJ1O2P500	C	1000PF	500V	C1250	ECEA1CGE470	E	47UF	16V
C1043	ECEA2AGE100	E	10UF	100V	C1252	ECA2CHG010	E	1UF	160V
C1050	ECEA1CGE470	E	47UF	16V	C1253	TACBG2E683KT	C	0.068UF	K 250V
C1052	ECA2CHG010	E	1UF	160V	C1301	ECEAOJKG470	E	47UF	6.3V
C1053	TACBG2E683KT	C	0.068UF	K 250V	C1302	ECUX1H1O3KBG	C	0.01UF	K 50V
C1101	ECEAOJKG221	E	220UF	6.3V	C1303	ECUX1H1O3KBG	C	0.01UF	K 50V
C1102	ECUX1H1O3KBG	C	0.01UF	K 50V	C1304	ECEA1CKG470	E	47UF	16V
C1104	ECUX1H1O3KBG	C	0.01UF	K 50V	C1305	ECUX1H1O3KBG	C	0.01UF	K 50V
C1105	ECUX1H1O3KBG	C	0.01UF	K 50V	C1306	ECUX1H1O3KBG	C	0.01UF	K 50V
C1107	ECUX1H1O3KBG	C	0.01UF	K 50V	C1311	ECEA1HKG010	E	1UF	50V
C1108	ECUX1H272JCX	C	2700PF	J 50V	C1312	ECEA1HKG010	E	1UF	50V
C1111	ECEAOJKG221	E	220UF	6.3V	C1321	TACCJ1O3P200	C	0.01UF	200V
C1112	ECUX1H1O3KBG	C	0.01UF	K 50V	C1322	ECEA1EGE101	E	100UF	25V
C1121	ECUX1H1O3KBG	C	0.01UF	K 50V	C1323	ECEA1EGE100	E	10UF	25V
C1122	ECUX1H1O3KBG	C	0.01UF	K 50V	C1324	ECUX1H1O3KBG	C	0.01UF	K 50V
C1123	ECEA1CGE100	E	10UF	16V	C1325	ECUX1H1O3KBG	C	0.01UF	K 50V
C1126	ECUX1H1O3KBG	C	0.01UF	K 50V	C1326	ECUX1H1O4ZFX	C	0.1UF	Z 50V
C1128	ECUX1H1O3KBG	C	0.01UF	K 50V	C1327	ECUX1H1O3KBG	C	0.01UF	K 50V
C1129	ECUX1C1O5ZFX	C	1UF	Z 16V	C1328	ECEA1CGE101	E	100UF	16V
C1130	ECUX1H1O3KBG	C	0.01UF	K 50V	C1329	ECEA1EGE100	E	10UF	25V
C1131	ECUX1H1O3KBG	C	0.01UF	K 50V	C1330	ECUX1H1O3KBG	C	0.01UF	K 50V
C1132	ECUX1H750JCG	C	75PF	J 50V	C1331	ECUX1H1O3KBG	C	0.01UF	K 50V
C1133	ECUX1H150JCN	C	15PF	J 50V	C1334	ECEA1CGE101	E	100UF	16V
C1134	ECUX1H1O3KBG	C	0.01UF	K 50V	C1339	ECUX1H332KBN	C	3300PF	K 50V
C1135	ECEA1CGE470	E	47UF	16V	C1341	ECUX1H1O3KBG	C	0.01UF	K 50V
C1136	ECEA1HGE2R2	E	2.2UF	50V	C1344	ECUX1H1O3KBG	C	0.01UF	K 50V
C1137	TACCJ1O3P200	C	0.01UF	200V	C1345	ECUX1H1O3KBG	C	0.01UF	K 50V
C1138	ECA1HEN010	E	1UF	50V	C1347	ECEA1CGE470	E	47UF	16V
C1139	ECUX1H1O3KBG	C	0.01UF	K 50V	C1351	ECEA1EGE100	E	10UF	25V
C1140	TACBH2A474MT	C	0.47UF	M 100V	C1353	ECUX1H1O4ZFX	C	0.1UF	Z 50V
C1142	TACCJ1O2P500	C	1000PF	500V	C1354	ECUX1H1O3KBG	C	0.01UF	K 50V
C1143	ECEA2AGE100	E	10UF	100V	C1355	ECA2CHG100	E	10UF	160V
C1150	ECEA1CGE470	E	47UF	16V	C1357	ECUX1H1O3KBG	C	0.01UF	K 50V
C1152	ECA2CHG010	E	1UF	160V	C1359	ECEA1EGE100	E	10UF	25V
C1153	TACBG2E683KT	C	0.068UF	K 250V	C1360	ECUX1H1O3KBG	C	0.01UF	K 50V
C1201	ECEAOJKG221	E	220UF	6.3V	C1362	ECEA2AGE101	E	100UF	100V
C1202	ECUX1H1O3KBG	C	0.01UF	K 50V	C1363	TACCJ1O2P500	C	1000PF	500V
C1204	ECUX1H1O3KBG	C	0.01UF	K 50V	C1364	ECA1CHG102	E	1000UF	16V
C1205	ECUX1H1O3KBG	C	0.01UF	K 50V	C1365	ECEA1CGE101	E	100UF	16V
C1207	ECUX1H1O3KBG	C	0.01UF	K 50V	C1366	TACCJ1O3P200	C	0.01UF	200V
C1208	ECUX1H272JCX	C	2700PF	J 50V	C1367	ECEA2EGE010	E	1UF	250V
C1211	ECEAOJKG221	E	220UF	6.3V	C1368	ECUX1H1O3KBG	C	0.01UF	K 50V
C1212	ECUX1H1O3KBG	C	0.01UF	K 50V	C1369	ECUX1H1O3KBG	C	0.01UF	K 50V
C1221	ECUX1H1O3KBG	C	0.01UF	K 50V	C1370	ECKD2H471KB5	C	470PF	K 500V
C1222	ECUX1H1O3KBG	C	0.01UF	K 50V	C1371	TACCJ1O3P200	C	0.01UF	200V
C1223	ECEA1CGE100	E	10UF	16V	C1373	ECKD2H103ZU	C	0.01UF	Z 500V
C1226	ECUX1H1O3KBG	C	0.01UF	K 50V	C1374	TACCJ1O3P200	C	0.01UF	200V
C1228	ECUX1H1O3KBG	C	0.01UF	K 50V	C1380	ECUX1H1O2KBN	C	1000PF	K 50V
C1229	ECUX1C1O5ZFX	C	1UF	Z 16V	C1501	ECUX1H1O3KBG	C	0.01UF	K 50V
C1230	ECUX1H1O3KBG	C	0.01UF	K 50V		RESISTORS			
C1231	ECUX1H1O3KBG	C	0.01UF	K 50V					
C1232	ECUX1H750JCG	C	75PF	J 50V	J1	ERD25TC0	C	O OHM	1/4W
C1233	ECUX1H150JCN	C	15PF	J 50V	J001	ERJ8GCYOROO	M	O OHM	1/8W
C1234	ECUX1H1O3KBG	C	0.01UF	K 50V	J002	ERJ8GCYOROO	M	O OHM	1/8W
C1235	ECEA1CGE470	E	47UF	16V	J003	ERJ8GCYOROO	M	O OHM	1/8W
C1236	ECEA1HGE2R2	E	2.2UF	50V	J004	ERJ6GEYOROO	M	O OHM	1/10W
C1237	TACCJ1O3P200	C	0.01UF	200V	J005	ERJ6GEYOROO	M	O OHM	1/10W
C1238	ECA1HEN010	E	1UF	50V	J006	ERJ6GEYOROO	M	O OHM	1/10W

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description				
JO07	ERJ6GEYOROO	M	O	OHM	1/10W	JO80	ERJ6GEYOROO	M	O	OHM	1/10W
JO08	ERJ8GCYOROO	M	O	OHM	1/8W	JO82	ERJ8GCYOROO	M	O	OHM	1/8W
JO09	ERJ8GCYOROO	M	O	OHM	1/8W	JO83	ERJ8GCYOROO	M	O	OHM	1/8W
JO10	ERJ8GCYOROO	M	O	OHM	1/8W	JO84	ERJ8GCYOROO	M	O	OHM	1/8W
JO11	ERJ8GCYOROO	M	O	OHM	1/8W	JO85	ERJ8GCYOROO	M	O	OHM	1/8W
JO12	ERJ8GCYOROO	M	O	OHM	1/8W	JO86	ERJ8GCYOROO	M	O	OHM	1/8W
JO13	ERJ6GEYOROO	M	O	OHM	1/10W	JO87	ERD25TCO	C	O	OHM	1/4W
JO14	ERJ8GCYOROO	M	O	OHM	1/8W	JO88	ERD25TCO	C	O	OHM	1/4W
JO15	ERJ8GCYOROO	M	O	OHM	1/8W	JO89	ERD25TCO	C	O	OHM	1/4W
JO16	ERJ6GEYOROO	M	O	OHM	1/10W	JO90	ERD25TCO	C	O	OHM	1/4W
JO17	ERJ8GCYOROO	M	O	OHM	1/8W	JO91	ERJ6GEYOROO	M	O	OHM	1/10W
JO18	ERJ8GCYOROO	M	O	OHM	1/8W	JO92	ERD25TCO	C	O	OHM	1/4W
JO19	ERJ6GEYOROO	M	O	OHM	1/10W	JO94	ERD25TCO	C	O	OHM	1/4W
JO20	ERD25TCO	C	O	OHM	1/4W	JO95	ERJ8GCYOROO	M	O	OHM	1/8W
JO21	ERJ8GCYOROO	M	O	OHM	1/8W	JO97	ERJ8GCYOROO	M	O	OHM	1/8W
JO22	ERJ6GEYOROO	M	O	OHM	1/10W	JO98	ERDS2TCO	C	O	OHM	1/4W
JO23	ERJ8GCYOROO	M	O	OHM	1/8W	JO99	ERJ6GEYOROO	M	O	OHM	1/10W
JO25	ERJ8GCYOROO	M	O	OHM	1/8W	J100	ERJ8GCYOROO	M	O	OHM	1/8W
JO26	ERD25TCO	C	O	OHM	1/4W	J101	ERJ8GCYOROO	M	O	OHM	1/8W
JO30	ERD25TCO	C	O	OHM	1/4W	J102	ERJ6GEYOROO	M	O	OHM	1/10W
JO31	ERD25TCO	C	O	OHM	1/4W	J103	ERJ8GCYOROO	M	O	OHM	1/8W
JO32	ERDS2TCO	C	O	OHM	1/4W	J104	ERDS2TCO	C	O	OHM	1/4W
JO34	ERJ8GCYOROO	M	O	OHM	1/8W	J105	ERJ8GCYOROO	M	O	OHM	1/8W
JO35	ERJ8GCYOROO	M	O	OHM	1/8W	J106	ERDS2TCO	C	O	OHM	1/4W
JO36	ERJ8GCYOROO	M	O	OHM	1/8W	J108	ERD25TCO	C	O	OHM	1/4W
JO37	ERJ6GEYOROO	M	O	OHM	1/10W	J109	ERJ6GEYOROO	M	O	OHM	1/10W
JO38	ERJ6GEYOROO	M	O	OHM	1/10W	J110	ERJ8GCYOROO	M	O	OHM	1/8W
JO39	ERJ8GCYOROO	M	O	OHM	1/8W	J111	ERD25TCO	C	O	OHM	1/4W
JO40	ERJ8GCYOROO	M	O	OHM	1/8W	J112	ERJ8GCYOROO	M	O	OHM	1/8W
JO41	ERJ8GCYOROO	M	O	OHM	1/8W	J113	ERJ8GCYOROO	M	O	OHM	1/8W
JO42	ERJ8GCYOROO	M	O	OHM	1/8W	J117	ERJ8GCYOROO	M	O	OHM	1/8W
JO43	ERJ8GCYOROO	M	O	OHM	1/8W	J118	ERD25TCO	C	O	OHM	1/4W
JO44	ERJ6GEYOROO	M	O	OHM	1/10W	J119	ERJ8GCYOROO	M	O	OHM	1/8W
JO45	ERJ8GCYOROO	M	O	OHM	1/8W	J120	ERJ8GCYOROO	M	O	OHM	1/8W
JO46	ERJ6GEYOROO	M	O	OHM	1/10W	J121	ERDS2TCO	C	O	OHM	1/4W
JO47	ERJ8GCYOROO	M	O	OHM	1/8W	J123	ERJ8GCYOROO	M	O	OHM	1/8W
JO48	ERJ8GCYOROO	M	O	OHM	1/8W	J124	ERJ8GCYOROO	M	O	OHM	1/8W
JO49	ERJ8GCYOROO	M	O	OHM	1/8W	J125	ERDS2TCO	C	O	OHM	1/4W
JO50	ERJ8GCYOROO	M	O	OHM	1/8W	J126	ERJ8GCYOROO	M	O	OHM	1/8W
JO51	ERJ6GEYOROO	M	O	OHM	1/10W	J127	ERD25TCO	C	O	OHM	1/4W
JO52	ERJ6GEYOROO	M	O	OHM	1/10W	J128	ERD25TCO	C	O	OHM	1/4W
JO53	ERJ6GEYOROO	M	O	OHM	1/10W	J129	ERJ8GCYOROO	M	O	OHM	1/8W
JO54	ERJ8GCYOROO	M	O	OHM	1/8W	J130	ERJ8GCYOROO	M	O	OHM	1/8W
JO55	ERJ8GCYOROO	M	O	OHM	1/8W	J131	ERJ8GCYOROO	M	O	OHM	1/8W
JO57	ERJ8GCYOROO	M	O	OHM	1/8W	J132	ERJ6GEYOROO	M	O	OHM	1/10W
JO58	ERJ6GEYOROO	M	O	OHM	1/10W	J133	ERD25TCO	C	O	OHM	1/4W
JO59	ERJ8GCYOROO	M	O	OHM	1/8W	J134	ERJ8GCYOROO	M	O	OHM	1/8W
JO60	ERD25TCO	C	O	OHM	1/4W	J135	ERD25TCO	C	O	OHM	1/4W
JO61	ERJ8GCYOROO	M	O	OHM	1/8W	J138	ERD25TCO	C	O	OHM	1/4W
JO63	ERD25TCO	C	O	OHM	1/4W	J139	ERJ6GEYOROO	M	O	OHM	1/10W
JO64	ERJ6GEYOROO	M	O	OHM	1/10W	J141	ERJ8GCYOROO	M	O	OHM	1/8W
JO65	ERJ6GEYOROO	M	O	OHM	1/10W	J142	ERD25TCO	C	O	OHM	1/4W
JO69	ERD25TCO	C	O	OHM	1/4W	J144	ERJ8GCYOROO	M	O	OHM	1/8W
JO70	ERD25TCO	C	O	OHM	1/4W	J146	ERJ8GCYOROO	M	O	OHM	1/8W
JO71	ERD25TCO	C	O	OHM	1/4W	J149	ERJ8GCYOROO	M	O	OHM	1/8W
JO72	ERD25TCO	C	O	OHM	1/4W	J151	ERD25TCO	C	O	OHM	1/4W
JO73	ERJ8GCYOROO	M	O	OHM	1/8W	J152	ERJ8GCYOROO	M	O	OHM	1/8W
JO74	ERJ8GCYOROO	M	O	OHM	1/8W	J153	ERJ6GEYOROO	M	O	OHM	1/10W
JO75	ERJ8GCYOROO	M	O	OHM	1/8W	J156	ERDS2TCO	C	O	OHM	1/4W
JO76	ERJ8GCYOROO	M	O	OHM	1/8W	J157	ERJ8GCYOROO	M	O	OHM	1/8W
JO78	ERJ6GEYOROO	M	O	OHM	1/10W	J158	ERJ8GCYOROO	M	O	OHM	1/8W
JO79	ERJ6GEYOROO	M	O	OHM	1/10W	J159	ERD25TCO	C	O	OHM	1/4W

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
J160	ERJ8GCYOROO	M	O OHM	1/8W	J833	ERD25TCO	C	O OHM	1/4W
J161	ERJ8GCYOROO	M	O OHM	1/8W	J834	ERD25TCO	C	O OHM	1/4W
J162	ERJ8GCYOROO	M	O OHM	1/8W	J835	ERD25TCO	C	O OHM	1/4W
J163	ERJ6GEYOROO	M	O OHM	1/10W	J836	ERD25TCO	C	O OHM	1/4W
J164	ERJ6GEYOROO	M	O OHM	1/10W	J840	ERJ6GEYOROO	M	O OHM	1/10W
J166	ERJ6GEYOROO	M	O OHM	1/10W	J847	ERJ8GCYOROO	M	O OHM	1/8W
J167	ERJ8GCYOROO	M	O OHM	1/8W	J848	ERJ8GCYOROO	M	O OHM	1/8W
J168	ERJ8GCYOROO	M	O OHM	1/8W	J849	ERJ8GCYOROO	M	O OHM	1/8W
J169	ERJ6GEYOROO	M	O OHM	1/10W	J850	ERJ8GCYOROO	M	O OHM	1/8W
J170	ERJ8GCYOROO	M	O OHM	1/8W	J852	ERJ6GEYOROO	M	O OHM	1/10W
J171	ERJ6GEYOROO	M	O OHM	1/10W	J854	ERD25TCO	C	O OHM	1/4W
J172	ERJ8GCYOROO	M	O OHM	1/8W	J855	ERD25TCO	C	O OHM	1/4W
J173	ERJ6GEYOROO	M	O OHM	1/10W	J856	ERD25TCO	C	O OHM	1/4W
J174	ERD25TCO	C	O OHM	1/4W	J857	ERJ8GCYOROO	M	O OHM	1/8W
J175	ERJ8GCYOROO	M	O OHM	1/8W	J858	ERJ6GEYOROO	M	O OHM	1/10W
J176	ERJ6GEYOROO	M	O OHM	1/10W	J865	ERDS2TCO	C	O OHM	1/4W
J179	ERJ8GCYOROO	M	O OHM	1/8W	J867	ERDS2TCO	C	O OHM	1/4W
J180	ERJ6GEYOROO	M	O OHM	1/10W	J868	ERJ6GEYOROO	M	O OHM	1/10W
J181	ERJ6GEYOROO	M	O OHM	1/10W	J869	ERD25TCO	C	O OHM	1/4W
J182	ERJ6GEYOROO	M	O OHM	1/10W	J870	ERD25TCO	C	O OHM	1/4W
J183	ERJ8GCYOROO	M	O OHM	1/8W	J875	ERD25TCO	C	O OHM	1/4W
J184	ERJ6GEYOROO	M	O OHM	1/10W	J876	ERJ8GCYOROO	M	O OHM	1/8W
J185	ERJ8GCYOROO	M	O OHM	1/8W	J877	ERJ8GCYOROO	M	O OHM	1/8W
J186	ERD25TCO	C	O OHM	1/4W	J885	ERJ8GCYOROO	M	O OHM	1/8W
J188	ERJ8GCYOROO	M	O OHM	1/8W	J886	ERJ8GCYOROO	M	O OHM	1/8W
J190	ERJ8GCYOROO	M	O OHM	1/8W	J887	ERD25TCO	C	O OHM	1/4W
J191	ERJ8GCYOROO	M	O OHM	1/8W	J888	ERJ8GCYOROO	M	O OHM	1/8W
J195	ERJ8GCYOROO	M	O OHM	1/8W	J889	ERJ8GCYOROO	M	O OHM	1/8W
J196	ERJ6GEYOROO	M	O OHM	1/10W	J891	ERD25TCO	C	O OHM	1/4W
J197	ERJ8GCYOROO	M	O OHM	1/8W	J892	ERD25TCO	C	O OHM	1/4W
J198	ERJ6GEYOROO	M	O OHM	1/10W	J896	ERD25TCO	C	O OHM	1/4W
J200	ERJ6GEYOROO	M	O OHM	1/10W	J898	ERD25TCO	C	O OHM	1/4W
J201	ERJ6GEYOROO	M	O OHM	1/10W	J910	ERJ6GEYOROO	M	O OHM	1/10W
J202	ERJ6GEYOROO	M	O OHM	1/10W	J913	ERD25TCO	C	O OHM	1/4W
J203	ERJ8GCYOROO	M	O OHM	1/8W	J923	ERJ8GCYOROO	M	O OHM	1/8W
J429	ERJ8GCYOROO	M	O OHM	1/8W	J924	ERJ8GCYOROO	M	O OHM	1/8W
J802	ERD25TCO	C	O OHM	1/4W	J925	ERJ8GCYOROO	M	O OHM	1/8W
J804	ERD25TCO	C	O OHM	1/4W	J926	ERJ8GCYOROO	M	O OHM	1/8W
J805	ERDS2TCO	C	O OHM	1/4W	J928	ERJ8GCYOROO	M	O OHM	1/8W
J807	ERD25TCO	C	O OHM	1/4W	J929	ERJ8GCYOROO	M	O OHM	1/8W
J808	ERD25TCO	C	O OHM	1/4W	J930	ERJ8GCYOROO	M	O OHM	1/8W
J809	ERJ8GCYOROO	M	O OHM	1/8W	J931	ERJ6GEYOROO	M	O OHM	1/10W
J811	ERD25TCO	C	O OHM	1/4W	J932	ERJ6GEYOROO	M	O OHM	1/10W
J812	ERD25TCO	C	O OHM	1/4W	J933	ERJ6GEYOROO	M	O OHM	1/10W
J813	ERJ8GCYOROO	M	O OHM	1/8W	J936	ERJ8GCYOROO	M	O OHM	1/8W
J814	ERD25TCO	C	O OHM	1/4W	J937	ERJ8GCYOROO	M	O OHM	1/8W
J815	ERJ8GCYOROO	M	O OHM	1/8W	J938	ERJ6GEYOROO	M	O OHM	1/10W
J817	ERD25TCO	C	O OHM	1/4W	J939	ERJ8GCYOROO	M	O OHM	1/8W
J818	ERD25TCO	C	O OHM	1/4W	J941	ERJ8GCYOROO	M	O OHM	1/8W
J819	ERJ8GCYOROO	M	O OHM	1/8W	J942	ERJ8GCYOROO	M	O OHM	1/8W
J820	ERJ8GCYOROO	M	O OHM	1/8W	J943	ERJ8GCYOROO	M	O OHM	1/8W
J821	ERJ8GCYOROO	M	O OHM	1/8W	J944	ERJ6GEYOROO	M	O OHM	1/10W
J822	ERD25TCO	C	O OHM	1/4W	J1202	ERJ6GEYOROO	M	O OHM	1/10W
J823	ERJ8GCYOROO	M	O OHM	1/8W	J1236	ERJ6GEYOROO	M	O OHM	1/10W
J824	ERD25TCO	C	O OHM	1/4W	J1271	ERJ8GCYOROO	M	O OHM	1/8W
J825	ERJ6GEYOROO	M	O OHM	1/10W	J1304	ERD25TCO	C	O OHM	1/4W
J827	ERD25TCO	C	O OHM	1/4W	J1305	ERD25TCO	C	O OHM	1/4W
J828	ERD25TCO	C	O OHM	1/4W	J1505	ERJ6GEYOROO	M	O OHM	1/10W
J829	ERD25TCO	C	O OHM	1/4W	L1371	ERDS2TCO	C	O OHM	1/4W
J830	ERD25TCO	C	O OHM	1/4W	R10	ERDS2TJ101	C	100 OHM J	1/4W
J831	ERD25TCO	C	O OHM	1/4W	R11	ERJ6ENF1002	M	10K OHM F	1/10W
J832	ERD25TCO	C	O OHM	1/4W	R12	ERJ6ENF4703	M	470K OHM F	1/10W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R13	ERJ6ENF1052	M	10.5K OHM	F	1/10W	R287	ERJ6GEYJ103	M	10K OHM	J	1/10W
R14	ERJ6ENF3301	M	3.3K OHM	F	1/10W	R288	ERJ6ENF1501	M	1.5K OHM	F	1/10W
R15	ERG2SJ183	M	18K OHM	J	2W	R292	ERJ6GEYJ433	M	43K OHM	J	1/10W
R16	ERJ6ENF82R5	M	82.5 OHM	F	1/10W	R293	ERJ6ENF5361	M	5.36K OHM	F	1/10W
R18	ERG1SJ273	M	27K OHM	J	1W	R296	ERJ6GEYJ101	M	100 OHM	J	1/10W
R19	ERJ6ENF4702	M	47K OHM	F	1/10W	R297	ERJ6GEYJ102	M	1K OHM	J	1/10W
R20	ERJ6ENF4702	M	47K OHM	F	1/10W	R298	ERJ6GEYJ122	M	1.2K OHM	J	1/10W
R22	ERJ6GEYOROO	M	O OHM		1/10W	R301	ERJ6ENF2001	M	2K OHM	F	1/10W
R23	ERJ6GEYJ105	M	1M OHM	J	1/10W	R302	ERJ6ENF3011	M	3.01K OHM	F	1/10W
R24	ERJ6ENF4703	M	470K OHM	F	1/10W	R303	ERJ6GEYJ510	M	51 OHM	J	1/10W
R25	ERJ6ENF1000	M	100 OHM	F	1/10W	R304	ERJ6GEYJ392	M	3.9K OHM	J	1/10W
R26	ERJ6GEYJ333	M	33K OHM	J	1/10W	R305	ERJ6GEYJ223	M	22K OHM	J	1/10W
R101	ERJ6ENF6042	M	60.4K OHM	F	1/10W	R306	ERJ6ENF2431	M	2.43K OHM	F	1/10W
R102	ERJ6ENF6982	M	69.8K OHM	F	1/10W	R307	ERJ6GEYJ223	M	22K OHM	J	1/10W
R103	ERJ6ENF3742	M	37.4K OHM	F	1/10W	R308	ERJ6ENF321	M	3.32K OHM	F	1/10W
R105	ERJ6GEYJ102	M	1K OHM	J	1/10W	R310	ERJ6GEYJ273	M	27K OHM	J	1/10W
R106	ERJ6GEYJ681	M	680 OHM	J	1/10W	R311	ERJ6GEYJ104	M	100K OHM	J	1/10W
R108	ERJ6ENF1741	M	1.74K OHM	F	1/10W	R312	ERJ6GEYJ103	M	10K OHM	J	1/10W
R109	ERJ6ENF3321	M	3.32K OHM	F	1/10W	R313	ERJ6GEYJ104	M	100K OHM	J	1/10W
R111	ERJ6GEYJ272	M	2.7K OHM	J	1/10W	R314	ERJ6GEYJ223	M	22K OHM	J	1/10W
R113	ERJ6GEYJ272	M	2.7K OHM	J	1/10W	R315	ERJ6GEYJ103	M	10K OHM	J	1/10W
R114	ERJ8GCYJ2R7	M	2.7 OHM	J	1/8W	R317	ERJ6GEYJ101	M	100 OHM	J	1/10W
R115	ERG2SJ100	M	10 OHM	J	2W	R323	ERJ6GEYOROO	M	O OHM		1/10W
R201	ERJ6GEYJ101	M	100 OHM	J	1/10W	R336	ERJ6ENF9100	M	910 OHM	F	1/10W
R202	ERJ6GEYJ122	M	1.2K OHM	J	1/10W	R350	ERQ14AJ100	F	10 OHM	J	1/4W
R216	ERJ6GEYJ822	M	8.2K OHM	J	1/10W	R351	ERDS2TJ102	C	1K OHM	J	1/4W
R217	ERJ6GEYJ102	M	1K OHM	J	1/10W	R352	ERJ6ENF2051	M	2.05K OHM	F	1/10W
R218	ERJ6GEYJ332	M	3.3K OHM	J	1/10W	R354	ERJ6ENF2871	M	2.87K OHM	F	1/10W
R219	ERJ6GEYJ153	M	15K OHM	J	1/10W	R355	ERJ6ENF6982	M	69.8K OHM	F	1/10W
R222	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R356	ERG3FJ382	M	3.3K OHM	J	3W
R225	ERJ8GCYJ222	M	2.2K OHM	J	1/8W	R357	ERJ8GCYJ470	M	47 OHM	J	1/8W
R226	ERJ6GEYJ222	M	2.2K OHM	J	1/10W	R358	ERDS2TJ100	C	10 OHM	J	1/4W
R227	ERJ6GEYJ102	M	1K OHM	J	1/10W	R359	ERQ14AJ100	F	10 OHM	J	1/4W
R228	ERJ12YJ102	M	1K OHM	J	1/2W	R371	ERJ8GCYJ302	M	3K OHM	J	1/8W
R231	ERJ6GEYJ102	M	1K OHM	J	1/10W	R372	ERDS1FJ364	C	360K OHM	J	1/2W
R232	ERJ6GEYJ102	M	1K OHM	J	1/10W	R373	ERJ8GCYJ475	M	4.7M OHM	J	1/8W
R233	ERJ6GEYJ102	M	1K OHM	J	1/10W	R374	ERJ8GCYJ683	M	68K OHM	J	1/8W
R234	ERJ6GEYJ102	M	1K OHM	J	1/10W	R375	ERJ8ENF1101	M	1.1K OHM	F	1/8W
R235	ERJ6GEYJ223	M	22K OHM	J	1/10W	R376	ERJ6GEYU562	M	5.6K OHM	J	1/10W
R236	ERJ6GEYJ223	M	22K OHM	J	1/10W	R377	ERJ6GEYJ103	M	10K OHM	J	1/10W
R237	ERJ6GEYJ223	M	22K OHM	J	1/10W	R378	ERJ6ENF8660	M	866 OHM	F	1/10W
R238	ERJ6GEYJ223	M	22K OHM	J	1/10W	R379	ERJ8GCYJ102	M	1K OHM	J	1/8W
R240	ERJ8GCYOROO	M	O OHM		1/8W	R380	ERJ6ENF2003	M	200K OHM	F	1/10W
R241	ERJ8GCYOROO	M	O OHM		1/8W	R381	ERJ6GEYJ102	M	1K OHM	J	1/10W
R243	ERJ8GCYOROO	M	O OHM		1/8W	R382	ERJ6GEYJ152	M	1.5K OHM	J	1/10W
R244	ERJ8GCYOROO	M	O OHM		1/8W	R383	ERDS1FJ390	C	39 OHM	J	1/2W
R250	ERJ6GEYJ331	M	330 OHM	J	1/10W	R384	ERJ6GEYJ472	M	4.7K OHM	J	1/10W
R252	ERJ6GEYJ331	M	330 OHM	J	1/10W	R385	ERJ6ENF8872	M	88.7K OHM	F	1/10W
R260	ERJ12YJ332	M	3.3K OHM	J	1/2W	R386	ERDS1FJ104	C	100K OHM	J	1/2W
R261	ERJ6GEYJ682	M	6.8K OHM	J	1/10W	R387	ERJ6GEYJ103	M	10K OHM	J	1/10W
R262	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R388	ERDS1FJ125	C	1.2M OHM	J	1/2W
R263	ERJ6GEYJ392	M	3.9K OHM	J	1/10W	R389	ERJ6GEYJ244	M	240K OHM	J	1/10W
R264	ERJ6GEYJ392	M	3.9K OHM	J	1/10W	R390	ERG1SJ473	M	47K OHM	J	1W
R266	ERJ6GEYOROO	M	O OHM		1/10W	R395	ERD25TCO	C	O OHM		1/4W
R267	ERJ6GEYJ682	M	6.8K OHM	J	1/10W	R400	ERJ6GEYJ472	M	4.7K OHM	J	1/10W
R280	ERJ6GEYJ122	M	1.2K OHM	J	1/10W	R401	ERJ6GEYJ470	M	47 OHM	J	1/10W
R281	ERJ6GEYJ102	M	1K OHM	J	1/10W	R402	ERJ6GEYJ472	M	4.7K OHM	J	1/10W
R282	ERJ6ENF4992	M	49.9K OHM	F	1/10W	R403	ERJ6GEYJ103	M	10K OHM	J	1/10W
R283	ERJ6ENF8451	M	8.45K OHM	F	1/10W	R404	ERJ8GCYJ223	M	22K OHM	J	1/8W
R284	ERJ6ENF8451	M	8.45K OHM	F	1/10W	R405	ERJ6ENF6811	M	6.81K OHM	F	1/10W
R285	ERJ6GEYJ183	M	18K OHM	J	1/10W	R406	ERJ6ENF1742	M	17.4K OHM	F	1/10W
R286	ERJ6ENF1501	M	1.5K OHM	F	1/10W	R407	ERJ8GCYJ103	M	10K OHM	J	1/8W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description					
R408	ERJ6ENF9091	M	9.09K	OHM	F	1/10W	R573	ERQ12AU271	F	270	OHM	J	1/2W
R409	ERJ6GEYJ223	M	22K	OHM	J	1/10W	R574	ERDS1FJ181	C	180	OHM	J	1/2W
R410	ERJ8GCYJ103	M	10K	OHM	J	1/8W	R575	ERJ6ENF3922	M	39.2K	OHM	F	1/10W
R412	ERJ6ENF7871	M	7.87K	OHM	F	1/10W	R576	ERJ6ENF1002	M	10K	OHM	F	1/10W
R413	TAR106J0222H	M	2.2K	OHM	J	1/10W	R577	ERJ6ENF1002	M	10K	OHM	F	1/10W
R414	ERJ6ENF2941	M	2.94K	OHM	F	1/10W	R578	ERJ6ENF6491	M	6.49K	OHM	F	1/10W
R415	ERJ6ENF2212	M	22.1K	OHM	F	1/10W	R579	ERJ6ENF5622	M	56.2K	OHM	F	1/10W
R417	ERJ6ENF3242	M	32.4K	OHM	F	1/10W	R580	ERQ12AJR12HK	F	0.12	OHM	J	1/2W
R418	EROS2CKF1202	M	12K	OHM	F	1/4W	R582	ERG3FJ390	M	39	OHM	J	3W
R420	ERJ6ENF8661	M	8.66K	OHM	F	1/10W	R583	ERDS2TJ101	C	100	OHM	J	1/4W
R421	ERJ6ENF8450	M	845	OHM	F	1/10W	R584	ERDS2TJ101	C	100	OHM	J	1/4W
R423	ERX1SG1R2	M	1.2	OHM	G	1W	R585	ERJ6ENF4751	M	4.75K	OHM	F	1/10W
R424	ERJ8GCYJ392	M	3.9K	OHM	J	1/8W	R586	ERJ6ENF1502	M	15K	OHM	F	1/10W
R425	ERDS2TJ220	C	22	OHM	J	1/4W	R587	ERDS2TJ332	C	3.3K	OHM	J	1/4W
R426	ERJ6ENF4871	M	4.87K	OHM	F	1/10W	R588	TARRS5B150J2	M	15	OHM	J	5W
R427	ERDS2TJ1R0	C	1	OHM	J	1/4W	R589	TARRS5B150J2	M	15	OHM	J	5W
R428	ERX1SG1R8	M	1.8	OHM	G	1W	R599	ERQ1CJP220S	F	22	OHM	J	1W
R432	ERJ6GEYJ122	M	1.2K	OHM	J	1/10W	R602	ERQ14AJ100	F	10	OHM	J	1/4W
R440	ERJ8GCYJ103	M	10K	OHM	J	1/8W	R603	ERD25FJ100K	C	10	OHM	J	1/4W
R441	ERJ6GEYJ103	M	10K	OHM	J	1/10W	R605	ERD25FJ100K	C	10	OHM	J	1/4W
R454	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R610	ERJ8GCYJ154	M	150K	OHM	J	1/8W
R455	ERJ8GCYJ332	M	3.3K	OHM	J	1/8W	R620	ERJ8GCYJ223	M	22K	OHM	J	1/8W
R456	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R633	ERJ12YY104	M	100K	OHM	J	1/2W
R457	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R634	ERJ12YY104	M	100K	OHM	J	1/2W
R458	ERJ6GEYJ123	M	12K	OHM	J	1/10W	R644	ERQ14AJ100	F	10	OHM	J	1/4W
R459	ERJ6ENF6812	M	68.1K	OHM	F	1/10W	R645	ERDS2TC0	C	0	OHM		1/4W
R501	ERJ6ENF4221	M	4.22K	OHM	F	1/10W	R646	ERG1SJ220	M	22	OHM	J	1W
R502	ERJ6ENF5111	M	5.11K	OHM	F	1/10W	R650	ERJ6ENF3921	M	3.92K	OHM	F	1/10W
R503	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R651	ERJ6ENF3921	M	3.92K	OHM	F	1/10W
R504	ERJ6ENF2701	M	2.7K	OHM	F	1/10W	R652	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W
R506	ERJ6GEYJ332	M	3.3K	OHM	J	1/10W	R653	ERJ6ENF4531	M	4.53K	OHM	F	1/10W
R509	ERJ6GEYJ393	M	39K	OHM	J	1/10W	R656	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W
R516	ERJ6GEYJ332	M	3.3K	OHM	J	1/10W	R657	ERJ6GEYJ153	M	15K	OHM	J	1/10W
R519	ERJ6ENF2431	M	2.43K	OHM	F	1/10W	R658	ERJ6GEYJ273	M	27K	OHM	J	1/10W
R527	ERJ6GEYJ221	M	220	OHM	J	1/10W	R659	ERJ6ENF9091	M	9.09K	OHM	F	1/10W
R528	ERJ6ENF8200	M	820	OHM	F	1/10W	R660	ERJ8GCYJ104	M	100K	OHM	J	1/8W
R529	ERJ6ENF1002	M	10K	OHM	F	1/10W	R662	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R530	ERJ6ENF3921	M	3.92K	OHM	F	1/10W	R663	ERJ6ENF2492	M	24.9K	OHM	F	1/10W
R531	ERDS1FJ101	C	100	OHM	J	1/2W	R664	ERJ6ENF1502	M	15K	OHM	F	1/10W
R532	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R665	ERDS1FJ122	C	1.2K	OHM	J	1/2W
R534	ERJ6ENF1002	M	10K	OHM	F	1/10W	R667	ERJ6GEYJ273	M	27K	OHM	J	1/10W
R536	ERJ6GEYJ122	M	1.2K	OHM	J	1/10W	R669	ERJ6GEYJ334	M	330K	OHM	J	1/10W
R547	ERJ6GEYJ470	M	47	OHM	J	1/10W	R670	ERD25TC0	C	0	OHM		1/4W
R548	ERJ6GEYJ332	M	3.3K	OHM	J	1/10W	R671	ERJ6GEYJ221	M	220	OHM	J	1/10W
R549	ERG1SJ561	M	560	OHM	J	1W	R674	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R551	ERX3FJX1R8D	M	1.8	OHM	J	3W	R675	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R552	ERX3FJX1R8D	M	1.8	OHM	J	3W	R676	ERJ8GCYJ101	M	100	OHM	J	1/BW
R553	ERJ6GEYJ153	M	15K	OHM	J	1/10W	R677	ERJ6GEYJ561	M	560	OHM	J	1/10W
R554	ERX3FJX6R8D	M	6.8	OHM	J	3W	R678	ERJ6ENF2211	M	2.21K	OHM	F	1/10W
R559	ERJ6GEYJ104	M	100K	OHM	J	1/10W	R680	ERJ6GEYJ682	M	6.8K	OHM	J	1/10W
R560	ERDS1FJ472	C	4.7K	OHM	J	1/2W	R681	ERJ6GEYJ391	M	390	OHM	J	1/10W
R561	ERJ6GEYJ100	M	10	OHM	J	1/10W	R689	ERJ6GEYJ102	M	1K	OHM	J	1/10W
R562	ERG3FJ390	M	39	OHM	J	3W	R690	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W
R563	ERDS1FJ472	C	4.7K	OHM	J	1/2W	R691	ERJ8GCYOROO	M	0	OHM		1/BW
R564	ERJ6GEYJ100	M	10	OHM	J	1/10W	R692	ERJ6ENF4532	M	45.3K	OHM	F	1/10W
R565	ERDS1FJ472	C	4.7K	OHM	J	1/2W	R693	ERJ6ENF6491	M	6.49K	OHM	F	1/10W
R566	ERDS1FJ472	C	4.7K	OHM	J	1/2W	R694	ERJ12YY105	M	1M	OHM	J	1/2W
R567	ERJ6GEYJ100	M	10	OHM	J	1/10W	R695	ERJ8ENF3903	M	390K	OHM	F	1/8W
R569	ERJ6GEYJ100	M	10	OHM	J	1/10W	R696	ERDS1FJ274	C	270K	OHM	J	1/2W
R570	EROS2CKF3012	M	30.1K	OHM	F	1/4W	R697	ERDS1FJ564	C	560K	OHM	J	1/2W
R571	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W	R698	ERDS1FJ225	C	2.2M	OHM	J	1/2W
R572	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W	R699	ER025CKF7872	M	78.7K	OHM	F	1/4W

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description						
R701	ERJ6GEYJ392	M	3.9K	OHM	J	1/10W	R847	ERJ6GEYJ102	M	1K	OHM	J	1/10W
R702	ERJ6GEYJ392	M	3.9K	OHM	J	1/10W	R849	ERJ6ENF6041	M	6.04K	OHM	F	1/10W
R704	ERJ6GEYJ182	M	1.8K	OHM	J	1/10W	R850	ERJ6ENF4531	M	4.53K	OHM	F	1/10W
R705	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W	R851	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R706	ERJ6GEYJ101	M	100	OHM	J	1/10W	R852	ERJ6ENF3741	M	3.74K	OHM	F	1/10W
R707	ERJ6GEYJ392	M	3.9K	OHM	J	1/10W	R853	ERJ6GEYJ102	M	1K	OHM	J	1/10W
R708	ERJ6GEYJ124	M	120K	OHM	J	1/10W	R854	ERQ14AJR68	F	0.68	OHM	J	1/4W
R709	ERJ6GEYJ101	M	100	OHM	J	1/10W	R855	ERDS1FJ222	C	2.2K	OHM	J	1/2W
R710	ERJ6GEYJ823	M	82K	OHM	J	1/10W	R856	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R711	ERJ6GEYJ392	M	3.9K	OHM	J	1/10W	R857	ERDS1FJ122	C	1.2K	OHM	J	1/2W
R712	ERJ6ENF1002	M	10K	OHM	F	1/10W	R858	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R713	ERJ6ENF3321	M	3.32K	OHM	F	1/10W	R859	ERDS1FJ392	C	3.9K	OHM	J	1/2W
R714	ERJ6ENF1541	M	1.54K	OHM	F	1/10W	R860	ERJ6GEYJ102	M	1K	OHM	J	1/10W
R715	ERJ6ENF5620	M	562	OHM	F	1/10W	R861	ERQ12AJR33HK	F	0.33	OHM	J	1/2W
R717	ERDS1FJ332	C	3.3K	OHM	J	1/2W	R862	ERQ12AJR47	F	0.47	OHM	J	1/2W
R718	ERQ14AJ332HK	F	3.3K	OHM	J	1/4W	R863	ERQ12AJR47	F	0.47	OHM	J	1/2W
R719	ERJ6GEYJ103	M	10K	OHM	J	1/10W	R864	ERQ12AJR15K	F	0.15	OHM	J	1/2W
R720	ERJ6GEYJ104	M	100K	OHM	J	1/10W	R865	ERQ12AJR12HK	F	0.12	OHM	J	1/2W
R800	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R866	ERJ6GEYJ104	M	100K	OHM	J	1/10W
R801	ERC12AGK394	S	390K	OHM	K	1/2W	R867	ERG2SJ123	M	12K	OHM	J	2W
R802	ERTB6SFL100P	THERMISTOR			R868	ERQ12AJR47	F	0.47	OHM	J	1/2W		
R803	TAP102Q9RO	POSISTOR			R869	ERDS2TJ682	C	6.8K	OHM	J	1/4W		
R804	ERDS1FJ224	C	220K	OHM	J	1/2W	R870	ERJ6GEYJ102	M	1K	OHM	J	1/10W
R805	ERDS1FJ224	C	220K	OHM	J	1/2W	R871	ERJ6ENF4991	M	4.99K	OHM	F	1/10W
R806	ERG2SJ223	M	22K	OHM	J	2W	R872	ERJ6ENF1822	M	18.2K	OHM	F	1/10W
R807	ERJ8GCYJ562	M	5.6K	OHM	J	1/8W	R873	ERJ6ENF4222	M	42.2K	OHM	F	1/10W
R808	TARRS3B333J2	M	33K	OHM	J	3W	R874	ERJ6ENF2211	M	2.21K	OHM	F	1/10W
R809	ERDS2TJ221	C	220	OHM	J	1/4W	R875	ERJ6ENF7871	M	7.87K	OHM	F	1/10W
R810	ERJ6GEYJ104	M	100K	OHM	J	1/10W	R876	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W
R811	ERDS1FJ224	C	220K	OHM	J	1/2W	R877	ERJ6GEYJ753	M	75K	OHM	J	1/10W
R812	ERDS1FJ224	C	220K	OHM	J	1/2W	R878	ERJ6GEYOROO	M	0	OHM	J	1/10W
R813	ERJ6GEYJ152	M	1.5K	OHM	J	1/10W	R879	ERG1SJ683	M	68K	OHM	J	1W
R815	ERJ6GEYJ681	M	680	OHM	J	1/10W	R880	ERJ6ENF1211	M	1.21K	OHM	F	1/10W
R817	ERW2PKR18	W	0.18	OHM	K	2W	R881	ERJ6ENF1821	M	1.82K	OHM	F	1/10W
R818	ERJ6GEYJ273	M	27K	OHM	J	1/10W	R885	ERJ6GEYOROO	M	0	OHM	J	1/10W
R819	ERDS1FJ473	C	47K	OHM	J	1/2W	R886	ERJ6GEYJ473	M	47K	OHM	J	1/10W
R820	ERJ6GEYJ152	M	1.5K	OHM	J	1/10W	R888	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R821	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R889	ERJ6GEYJ391	M	390	OHM	J	1/10W
R822	ERJ6GEYJ182	M	1.8K	OHM	J	1/10W	R890	ERJ6GEYOROO	M	0	OHM	J	1/10W
R823	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R891	ERDS1FJ473	C	47K	OHM	J	1/2W
R824	ERJ6GEYJ681	M	680	OHM	J	1/10W	R892	ERJ6ENF4871	M	4.87K	OHM	F	1/10W
R825	ERJ6GEYJ821	M	820	OHM	J	1/10W	R893	ERJ6GEYJ683	M	68K	OHM	J	1/10W
R826	ERDS1FJ434	C	430K	OHM	J	1/2W	R894	ERDS1FJ183	C	18K	OHM	J	1/2W
R827	ERG2SJ223	M	22K	OHM	J	2W	R895	ERDS1FJ152	C	1.5K	OHM	J	1/2W
R828	ERJ6GEYJ392	M	3.9K	OHM	J	1/10W	R896	ERJ6GEYJ101	M	100	OHM	J	1/10W
R829	ERJ6GEYJ103	M	10K	OHM	J	1/10W	R897	ERDS1FJ122	C	1.2K	OHM	J	1/2W
R830	ERDS1FJ103	C	10K	OHM	J	1/2W	R898	ERJ6GEYJ272	M	2.7K	OHM	J	1/10W
R831	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R899	ERJ6GEYJ183	M	18K	OHM	J	1/10W
R832	ERJ6GEYJ103	M	10K	OHM	J	1/10W	R900	ERJ6GEYJ683	M	68K	OHM	J	1/10W
R833	ERQ12AJR47	F	0.47	OHM	J	1/2W	R901	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W
R834	ERW2PKR15	W	0.15	OHM	K	2W	R902	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W
R835	ERQ12HJ2R7	F	2.7	OHM	J	1/2W	R903	ERJ6GEYJ101	M	100	OHM	J	1/10W
R836	ERJ12YJ154	M	150K	OHM	J	1/2W	R904	ERJ6GEYJ101	M	100	OHM	J	1/10W
R837	ERJ12YJ154	M	150K	OHM	J	1/2W	R905	ERJ6GEYJ331	M	330	OHM	J	1/10W
R839	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R906	ERJ6GEYJ331	M	330	OHM	J	1/10W
R840	ERJ6GEYJ471	M	470	OHM	J	1/10W	R907	ERJ6GEYOROO	M	0	OHM	J	1/10W
R841	ERJ6GEYJ473	M	47K	OHM	J	1/10W	R908	ERDS2TJ106	C	10M	OHM	J	1/4W
R842	ERG1SJ223	M	22K	OHM	J	1W	R909	ERJ8GCYJ153	M	15K	OHM	J	1/8W
R843	ERJ8GCYJ223	M	22K	OHM	J	1/8W	R910	ERJ6GEYOROO	M	0	OHM	J	1/10W
R844	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R912	ERDS2TJ153	C	15K	OHM	J	1/4W
R845	ERJ6GEYJ331	M	330	OHM	J	1/10W	R912	ERJ6GEYOROO	M	0	OHM	J	1/10W
R846	ERJ6GEYJ223	M	22K	OHM	J	1/10W	R913	ERJ6GEYJ103	M	10K	OHM	J	1/10W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description					
R916	ERDS2TJ1O3	C	10K	OHM	J	1/4W	R1024	ERJ6GEYJ821	M	820	OHM	J	1/10W
R917	ERJ8GCYJ182	M	1.8K	OHM	J	1/8W	R1027	ERJ6GEYJ181	M	180	OHM	J	1/10W
R918	ERJ8GCYJ101	M	100	OHM	J	1/8W	R1028	ERJ6GEYOROO	M	0	OHM		1/10W
R919	ERJ6GEYJ391	M	390	OHM	J	1/10W	R1031	ERJ6ENF2260	M	226	OHM	F	1/10W
R920	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R1032	ERJ6ENF33R0	M	33	OHM	F	1/10W
R921	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R1035	ERJ6ENF1371	M	1.37K	OHM	F	1/10W
R930	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1036	ERJ12YJ122	M	1.2K	OHM	J	1/2W
R931	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R1037	ERJ6GEYJ331	M	330	OHM	J	1/10W
R932	ERJ6GEYJ103	M	10K	OHM	J	1/10W	R1038	ERJ6GEYJ682	M	6.8K	OHM	J	1/10W
R934	ERJ6ENF2212	M	22.1K	OHM	F	1/10W	R1042	ERDS2TJ102	C	1K	OHM	J	1/4W
R936	ERJ8GCYJ103	M	10K	OHM	J	1/8W	R1043	ERDS1FJ220	C	22	OHM	J	1/2W
R937	ERJ8GCYJ393	M	39K	OHM	J	1/8W	R1044	ERDS2TJ681	C	680	OHM	J	1/4W
R950	ERJ6GEYJ153	M	15K	OHM	J	1/10W	R1050	ERJ6GEYJ221	M	220	OHM	J	1/10W
R951	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1051	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R952	ERJ6ENF8251	M	8.25K	OHM	F	1/10W	R1052	ERDS2TJ224	C	220K	OHM	J	1/4W
R953	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1055	ERJ6ENF2262	M	22.6K	OHM	F	1/10W
R954	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1056	ERJ6ENF2872	M	28.7K	OHM	F	1/10W
R955	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1057	ERJ6GEYJ330	M	33	OHM	J	1/10W
R956	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R1100	ERJ8GCYOROO	M	0	OHM		1/8W
R957	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1101	TAR11OC88R7H	M	88.7	OHM	J	1/2W
R958	ERJ6GEYJ222	M	2.2K	OHM	J	1/10W	R1102	ERJ12YJ152	M	1.5K	OHM	J	1/2W
R959	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1103	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W
R960	ERJ6GEYJ333	M	33K	OHM	J	1/10W	R1110	ERJ8GCYOROO	M	0	OHM		1/8W
R961	ERJ6GEYOROO	M	0	OHM		1/10W	R1111	TAR11OC88R7H	M	88.7	OHM	J	1/2W
R962	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1112	ERJ12YJ152	M	1.5K	OHM	J	1/2W
R963	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1113	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W
R964	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1120	ERJ6GEYJ330	M	33	OHM	J	1/10W
R965	ERJ8GCYJ102	M	1K	OHM	J	1/8W	R1121	ERJ6GEYJ181	M	180	OHM	J	1/10W
R966	ERJ8GCYJ102	M	1K	OHM	J	1/8W	R1122	ERJ6GEYJ100	M	10	OHM	J	1/10W
R967	ERJ8GCYJ102	M	1K	OHM	J	1/8W	R1123	ERJ8GCYJ391	M	390	OHM	J	1/8W
R968	ERJ8GCYJ102	M	1K	OHM	J	1/8W	R1124	ERJ6GEYJ821	M	820	OHM	J	1/10W
R969	ERJ8GCYJ102	M	1K	OHM	J	1/8W	R1127	ERJ6GEYJ181	M	180	OHM	J	1/10W
R970	ERJ6GEYJ332	M	3.3K	OHM	J	1/10W	R1128	ERJ6GEYOROO	M	0	OHM		1/10W
R971	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1131	ERJ6ENF2260	M	226	OHM	F	1/10W
R972	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1132	ERJ6ENF33R0	M	33	OHM	F	1/10W
R973	ERJ6GEYJ101	M	100	OHM	J	1/10W	R1135	ERJ6ENF1371	M	1.37K	OHM	F	1/10W
R974	ERJ6GEYJ101	M	100	OHM	J	1/10W	R1136	ERJ12YJ122	M	1.2K	OHM	J	1/2W
R975	ERJ6GEYJ101	M	100	OHM	J	1/10W	R1137	ERJ6GEYJ331	M	330	OHM	J	1/10W
R978	ERJ6GEYJ101	M	100	OHM	J	1/10W	R1138	ERJ6GEYJ682	M	6.8K	OHM	J	1/10W
R979	ERJ6GEYJ101	M	100	OHM	J	1/10W	R1142	ERDS2TJ102	C	1K	OHM	J	1/4W
R980	ERDS1FJ151	C	150	OHM	J	1/2W	R1143	ERDS1FJ220	C	22	OHM	J	1/2W
R981	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1144	ERDS2TJ561	C	560	OHM	J	1/4W
R982	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1150	ERJ6GEYJ221	M	220	OHM	J	1/10W
R983	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1151	ERJ6GEYJ103	M	10K	OHM	J	1/10W
R984	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1152	ERDS2TJ224	C	220K	OHM	J	1/4W
R985	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1155	ERJ6ENF2262	M	22.6K	OHM	F	1/10W
R986	ERJ6GEYJ103	M	10K	OHM	J	1/10W	R1156	ERJ6ENF2872	M	28.7K	OHM	F	1/10W
R987	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1157	ERJ6GEYJ330	M	33	OHM	J	1/10W
R988	ERJ6GEYJ102	M	1K	OHM	J	1/10W	R1200	ERJ8GCYOROO	M	0	OHM		1/8W
R989	ERJ6GEYJ472	M	4.7K	OHM	J	1/10W	R1201	TAR11OC88R7H	M	88.7	OHM	J	1/2W
R1000	ERJ8GCYOROO	M	0	OHM		1/8W	R1202	ERJ12YJ152	M	1.5K	OHM	J	1/2W
R1001	TAR11OC88R7H	M	88.7	OHM	J	1/2W	R1203	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W
R1002	ERJ12YJ152	M	1.5K	OHM	J	1/2W	R1210	ERJ8GCYOROO	M	0	OHM		1/8W
R1003	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W	R1211	TAR11OC88R7H	M	88.7	OHM	J	1/2W
R1010	ERJ8GCYOROO	M	0	OHM		1/8W	R1212	ERJ12YJ152	M	1.5K	OHM	J	1/2W
R1011	TAR11OC88R7H	M	88.7	OHM	J	1/2W	R1213	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W
R1012	ERJ12YJ152	M	1.5K	OHM	J	1/2W	R1220	ERJ6GEYJ330	M	33	OHM	J	1/10W
R1013	ERJ6GEYJ562	M	5.6K	OHM	J	1/10W	R1221	ERJ6GEYJ181	M	180	OHM	J	1/10W
R1020	ERJ6GEYJ330	M	33	OHM	J	1/10W	R1222	ERJ6GEYJ100	M	10	OHM	J	1/10W
R1021	ERJ6GEYJ181	M	180	OHM	J	1/10W	R1223	ERJ8GCYJ391	M	390	OHM	J	1/8W
R1022	ERJ6GEYJ100	M	10	OHM	J	1/10W	R1224	ERJ6GEYJ821	M	820	OHM	J	1/10W
R1023	ERJ8GCYJ391	M	390	OHM	J	1/8W	R1227	ERJ6GEYJ181	M	180	OHM	J	1/10W

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
R1228	ERJ6GEYOR00	M	0 OHM	1/10W	R1401	ERJ6GEYJ331	M	330 OHM	J 1/10W
R1231	ERJ6ENF2260	M	226 OHM	F 1/10W	R1402	ERJ6ENF1002	M	10K OHM	F 1/10W
R1232	ERJ6ENF40R2	M	40.2 OHM	F 1/10W	R1403	ERJ6ENF1001	M	1K OHM	F 1/10W
R1235	ERJ6ENF1371	M	1.37K OHM	F 1/10W	R1404	ERJ6ENF2212	M	22.1K OHM	F 1/10W
R1236	ERJ12YJ122	M	1.2K OHM	J 1/2W	R1405	ERJ6ENF5621	M	5.62K OHM	F 1/10W
R1237	ERJ6GEYJ331	M	330 OHM	J 1/10W	R1406	ERJ6GEYJ101	M	100 OHM	J 1/10W
R1238	ERJ6GEYJ682	M	6.8K OHM	J 1/10W	R1408	ERJ6ENF1002	M	10K OHM	F 1/10W
R1242	ERDS2TJ102	C	1K OHM	J 1/4W	R1409	ERJ6ENF1002	M	10K OHM	F 1/10W
R1243	ERDS1FJ220	C	22 OHM	J 1/2W	R1501	ERJ6GEYJ473	M	47K OHM	J 1/10W
R1244	ERDS2TJ681	C	680 OHM	J 1/4W	R1502	ERJ6GEYJ473	M	47K OHM	J 1/10W
R1250	ERJ6GEYJ221	M	220 OHM	J 1/10W		OTHERS			
R1251	ERJ6GEYJ103	M	10K OHM	J 1/10W		TESA027	CRT PCB HOLDER		
R1252	ERDS2TJ224	C	220K OHM	J 1/4W		THECO159	SCREW(FOR CRT PCB HOLDER)		
R1255	ERJ6ENF2262	M	22.6K OHM	F 1/10W		THE902N	D-SUB SCREW		
R1256	ERJ6ENF2872	M	28.7K OHM	F 1/10W		THTFO01	SCREW		
R1257	ERJ6GEYJ330	M	33 OHM	J 1/10W		TMKK027	DOUBLE FACE TAPE		
R1301	ERJ6GEYJ392	M	3.9K OHM	J 1/10W		TMK87907	MICA SHEET		
R1302	ERJ6GEYJ392	M	3.9K OHM	J 1/10W		TMK87919	INSULATION SHEET		
R1303	ERJ6GEYJ101	M	100 OHM	J 1/10W		TMMJO12-1	SILICON TUBE		
R1304	ERJ6GEYJ101	M	100 OHM	J 1/10W		TMMKO30	INSULATION TUBE		
R1315	ERJ12YJ561	M	560 OHM	J 1/2W		TMM16452	CLAMPER		
R1316	ERJ6GEYJ222	M	2.2K OHM	J 1/10W		TMM81417	CORD BAND(BIG)		
R1320	ERDS2TJ333	C	33K OHM	J 1/4W		TSC8908-0	FERRITE CORE		
R1321	ERJ6GEYJ271	M	270 OHM	J 1/10W		TSXX046	PHONO PIN CABLE(GREY)		
R1322	ERJ6GEYJ271	M	270 OHM	J 1/10W		TSXX050	PHONO PIN CABLE(RED)		
R1323	ERJ6GEYJ561	M	560 OHM	J 1/10W		TSXX051	PHONO PIN CABLE(BLUE)		
R1324	ERJ6GEYJ331	M	330 OHM	J 1/10W					
R1326	ERJ6GEYJ101	M	100 OHM	J 1/10W		TUCC5095-1	AC SOCKET BRACKET		
R1328	ERJ6ENF4641	M	4.64K OHM	F 1/10W		TUCC5141	SHIELD PLATE(VIDEO PCB)		
R1329	ERJ6GEYJ331	M	330 OHM	J 1/10W		TUCC5154	SHIELD CASE(CRT PCB)		
R1330	ERJ6GEYJ474	M	470K OHM	J 1/10W		TUCC5155	SHIELD PLATE(CRT PCB)		
R1331	ERJ6GEYJ222	M	2.2K OHM	J 1/10W		TUWF008	BNC TERMINAL BRACKET		
R1332	ERJ6ENF3301	M	3.3K OHM	F 1/10W					
R1333	ERJ6GEYJ222	M	2.2K OHM	J 1/10W		XTV3+12J	SCREW		
R1334	ERJ6GEYJ222	M	2.2K OHM	J 1/10W		XWG3F10	WASHER		
R1335	ERJ6GEYJ152	M	1.5K OHM	J 1/10W	CL3	XYE3+EJ10	SCREW		
R1337	ERJ6GEYJ102	M	1K OHM	J 1/10W	CL5	TMME033	LEAD CLAMPER(M-TYPE)		
R1338	ERJ6GEYJ102	M	1K OHM	J 1/10W		TMM85490	LEAD CLAMPER		
R1339	ERJ6GEYJ223	M	22K OHM	J 1/10W					
R1341	ERJ6GEYJ101	M	100 OHM	J 1/10W	△	F801	XBA2C40TB15L	FUSE(4.0A)	
R1344	ERJ6ENF2491	M	2.49K OHM	F 1/10W		FG1	TJC85341	EARTH LUG	
R1345	ERJ6ENF1132	M	11.3K OHM	F 1/10W		FG2	TJC85341	EARTH LUG	
R1346	ERJ6ENF1272	M	12.7K OHM	F 1/10W		FG3	TJC85341	EARTH LUG	
R1347	ERJ6ENF1962	M	19.6K OHM	F 1/10W		FG4	TJC85341	EARTH LUG	
R1348	ERJ6ENF4121	M	4.12K OHM	F 1/10W		FG5	TJC85341	EARTH LUG	
R1349	ERJ6ENF1782	M	17.8K OHM	F 1/10W		FG6	TJC85341	EARTH LUG	
R1350	ERDS1FJ103	C	10K OHM	J 1/2W		FG8	TJC85341	EARTH LUG	
R1351	ERJ6GEYJ101	M	100 OHM	J 1/10W		FG9	TJC85341	EARTH LUG	
R1352	ERJ6GEYJ104	M	100K OHM	J 1/10W		FG10	TJC85341	EARTH LUG	
R1356	ERJ6ENF1002	M	10K OHM	F 1/10W					
R1357	ERJ6ENF5901	M	5.9K OHM	F 1/10W		FG11	TJC85341	EARTH LUG	
R1358	ERJ6GEYJ102	M	1K OHM	J 1/10W		FS801	TJC85502T	FUSE HOLDER	
R1359	ERJ6ENF2212	M	22.1K OHM	F 1/10W		FS802	TJC85502T	FUSE HOLDER	
R1360	EROS2CKF5113	M	511K OHM	F 1/4W		JC101	TJC85341	EARTH LUG	
R1361	ERJ6GEYJ272	M	2.7K OHM	J 1/10W		JC102	TJC85341	EARTH LUG	
R1370	ERJ6GEYOR00	M	0 OHM	1/10W		JC103	TJC85341	EARTH LUG	
R1372	ERJ8GCYOR00	M	0 OHM	1/8W		JC104	TJC85341	EARTH LUG	
R1380	ERJ6GEYJ472	M	4.7K OHM	J 1/10W		N11	EMCS0464M	4P CONNECTOR	
R1381	ERJ6ENF5901	M	5.9K OHM	F 1/10W		N11A-	TSXX052	2P/3P CONNECTOR ASSY	
R1382	ERJ6ENF5111	M	5.11K OHM	F 1/10W		N22A	TJSF07805	5P CONNECTOR	
R1383	ERJ6ENF4751	M	4.75K OHM	F 1/10W		N22B	TJSF16305	5P CONNECTOR	
R1399	ERJ8GCYOR00	M	0 OHM	1/8W		N101	TJS118590	2P CONNECTOR	
						N104	TJC85342T	LUG TERMINAL	
						N105	TJEA022	HEAT SINK TERMINAL	
						N106	TJC85342T	LUG TERMINAL	

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
N107-	TSXX054	1P/2P CONNECTOR ASSY			
N231	TJSF10400	BNC TERMINAL			
N232	TJSF10400	BNC TERMINAL			
△ N381	TJSF08600	CRT SOCKET			
N382	TJCDO03	TERMINAL			
△ N801	TJS8A9361	AC SOCKET			
N861	EMCS0264M	2P CONNECTOR			
N901	EMCS0451ML	4P CONNECTOR(L-TYPE)			
N1001	TJSF10400	BNC TERMINAL			
N1002A	TJSF07912	12P CONNECTOR(L-TYPE)			
N1002B	TJSF08012	12P CONNECTOR			
N1003A	TJSF07818	18P CONNECTOR			
N1003B	TJSF07818	18P CONNECTOR			
N1011	TJSF10515	15P CONNECTOR(D-SUB)			
N1012A	TJS8A4291	PHONO PIN CONNECTOR			
N1012B	TJS8A4291	PHONO PIN CONNECTOR			
N1101	TJSF10400	BNC TERMINAL			
N1112A	TJS8A4291	PHONO PIN CONNECTOR			
N1112B	TJS8A4291	PHONO PIN CONNECTOR			
N1201	TJSF10400	BNC TERMINAL			
N1212A	TJS8A4291	PHONO PIN CONNECTOR			
N1212B	TJS8A4291	PHONO PIN CONNECTOR			
N510-1	TEL302-9	TERMINAL			
N510-2	TEL302-9	TERMINAL			
N510-3	TEL302-9	TERMINAL			
N510-4	TEL302-9	TERMINAL			
N802-1	TEL302-9	TERMINAL			
N802-2	TEL302-9	TERMINAL			
△ PC820	TLP750D4	PHOTO COUPLER			
△ PC821	PC123FY8	PHOTO COUPLER			
Q16	UN11004	IC PROTECTOR(0.4A)			
RL571	TSE80892	RELAY			
△ RL801	TSEH0004	RELAY			
S290	TAG10003	SPARK GAP			
S371	TAGDSP751N	SPARK GAP			
S372	TAGDSP751N	SPARK GAP			
S381	TAX125X103MA	VARISTOR			
S382	ERZC05DK201U	VARISTOR			
S699	TAGDSP201MF	SPARK GAP			
S1001	TAGDSP201MF	SPARK GAP			
S1101	TAGDSP201MF	SPARK GAP			
S1201	TAGDSP201MF	SPARK GAP			
△ SW801	ESB91234A	SWITCH(POWER)			
SW901	EVQ33405R	SWITCH			
SW902	EVQ33405R	SWITCH			
SW903	EVQ33405R	SWITCH			
SW904	EVQ33405R	SWITCH			
TP1	TEL302-9	TERMINAL			
TP2	TEL302-9	TERMINAL			
TP3	TEL302-9	TERMINAL			
TP4	TEL302-9	TERMINAL			
TP5	TEL302-9	TERMINAL			
TP6	TEL302-9	TERMINAL			
X901	TSS2165TM	CRYSTAL OSCILLATOR			